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University News

MONDAY, DECEMBER 4, 1989 Rs. 2.50

ghth Convocation of the Dayalbagh Educational Institute, Agra. Mr. Justice G.D. Sahgal (Retd.), who delivered the Convocation Address, presenting a medal to one of the students.

COCHIN UNIVERSITY OF SCIENCE & TECHNOLOGY

COCHIN—682 022

No. Ad. D2/66/89 *REQUIRES* 17 Nov., 1989

PROFESSORS, READERS AND LECTURERS

Applications in the prescribed forms are invited from qualified candidates for appointment to the following posts included in the teaching category of the University :

Post. No.	Department/ School	Name of Post	Specialisation, if any.	No. of Posts
A.	**Post Reserved for Special Recruitment from SC/ST Communities**			
1.	Computer Science	Professor in Computer Science	Computer Science	1
B.	**Other Posts**			
1.	Physics	Professor in Physics	Opto electronics, Laser Technology or Spectroscopy.	1
2.	Industrial Fisheries	Reader in Industrial Fisheries	Fishery Economics/	1
3.	Industrial Fisheries	Reader in Industrial Fisheries	Management	1
4.	Physics	Reader in Physics	Opto electronics/ Laser Technology	1
5.	Ship Technology	Reader in Ship Technology	Ship Design/CAD	1
6.	Ship Technology	Reader in Ship Technology	Ocean Engineering/ Marine Engineering	1
7.	Ship Technology	Reader in Ship Technology	Resistance Propulsion and Ship Motion.	1
8.	Applied Economics	Lecturer in Economics	Industrial Economics	1
9.	Law	Lecturer in Law	Constitutional Law/ Maritime Law.	1
10.	Law	Lecturer in Law	Jurisprudence/Criminal Law	1
11.	Applied Chemistry	Lecturer in Applied Chemistry	Molecular Biology/ Genetic Engineering.	1
12.	Environmental Studies	Lecturer in Environmental Studies	Microbiology (anticipated vacancy)	1
C.	**Shot Vacancies**			
1.	Ship Technology	Reader in Ship Technology	Strength of ships and practical ship building	1
2.	Ship Technology	Lecturer in Ship Technology	Applied Mechanics	1

Scale of Pay	Professor	:	Rs. 2450-3600
	Reader	:	Rs. 1950-2950
	Lecturer	:	Rs. 1300-2725
Age (as on 1-1-1989)	Professor	:	Not more than 50 years
	Reader	:	Not more than 45 years
	Lecturer	:	Not more than 40 years

Note : (i) Age limit prescribed will be relaxed as per rules in the case of SC/ST and OBC candidates.
(ii) Age limit prescribed will not be applicable to the teachers already in service of this University.
(iii) The scales of pay are likely to be revised.

3. The selection and appointment against the above posts will be made in accordance with the provisions contained in the Cochin University of Science and Technology Act 1986 and the rules prescribed by University in this regard.
4. Communal rotation and reservation principles as provided under Clause (a), (b) and (c) of rule 14 and the provisions of rules 15, 16 and 17 of KS & SS Rs 1958 as amended from time to time will be applied to all posts listed under other posts and short vacancies while making appointment to these posts.
5. Prescribed application forms alongwith information sheets can be had on payment of Rs. 5/- at the University Cash Counter. Candidates belonging to SC/ST communities can get the same, free of cost. Applicatlon forms will be sent by post, if requested alongwith a postal order worth Rs. 5/- drawn in favour of the Registrar, Cochin University of Science and Technology payable at Cochin-682 022 Post Office and a self-addressed envelope (23 cm x 10 cm) bearing postal stamps worth Rs.3/-. The candidates belonging to SC/ST communities need not send the postal order; but they should send the self-addressed envelope bearing the postal stamps to get the application forms by post.
6. Request for application forms by post should reach this office before **15 December, 1989.**
7. Separate application should be submitted for each post applied for.
8. Completed applications alongwith copies of documents to prove age, community, qualifications, experience etc. should reach the Office of the Registrar before 5.00 p.m. on or before **20 December, 1989.** Late and defective applications will be summarily rejected.

V.J. Pappoo
REGISTRAR

18 JAN 1990

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Editor :
JITINDER SINGH

New Education Policy

Role of Management

D.K. Ghosh*

Packaging the entire education system, the New Education Policy (NEP) has talked about all aspects of education convering from the childhood-care stage to higher education, research, open university and distance education. In the plethora of official documents on education, the two Education Commissions' Reports viz. Radhakrishnan Commission Report (1947-48) and Kothari Commission Report (1964-66) have dealt with in greater detail of all aspects of education and although they date back long ago, yet most of the recommendations are valid even today also.

Undeniably, despite the fact that since independence 'the nation has invested a large slice of its resources in education' the fact remains that the huge education sector has not been able to pay dividend as was expected. The attributable reasons are many and they are quite complex in the context of social, economic and political scenario. However, the New Education Policy (NEP) recognised that 'with all its imbalances and shortcomings, the education system is a living entity which has vast achievements to its credit'. But it has also observed that the same very system presents an 'uneven, often conflicting picture'. Obviously, certain things have gone seriously wrong and it is high time for rectification. Such a picture certainly demands certain positive actions prioritising the need. The Programme of Action (POA) has identified that 'Making the System Work' is the pre-requisite to all other actions for unless the system works, nothing will work, and the entire effort will crumble.

Here, 'system' means the entire education system. However, keeping in view the area that we are to deliberate upon, the POA also recognised that 'the system of education is an integral part of the total socio-economic system and that transformation of the system of education will have to go side by side with critical changes in the rest of the system'. Thus, this paper will discuss the area of higher education management firstly as part of the entire education system and secondly as part of the socio-economic system of the society.

The NPE while discussing the various aspects and areas of education and more particularly higher education has not made particular mention of the role of 'Administration' we generally understand. However, as pre-requisites of 'The Implementation of Policy, Strategies and Operational Pre-requisites' under the Chapter on 'Making the System Work', the POA identified that it is essential to lay down certain norms for observance by the administration (Government as well as managements of educational institutions), teachers and students. It also made it clear that none of such norms should be negotiable or conditional on fulfilment by any other category of organization or individual of their obligations.

Precisely, adequate stress has been laid on the need of responsibility and accountability without which no system can successfully and objectively work.

Basically, it is true that the system of education is one of the teacher and taught and in that administration is not fundamental. But

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in the context of the complexities of the system, 'information system' need and the need to have a system of smooth facilities—whether it is teaching, research, project or consultancy, administrative support has become *sine-qua-non* to the system.

Turning to Institutions, the POA has clearly recognised the need of institutional improvement and in that direction, it has acknowledged that 'As the internal efficiency of each institution improves, the performance of teachers and students would improve also'. This implies the role that the administration is to play in the entire system, for bringing about greater internal efficiency of each institution, means improving the existing administration—its culture, capacity and content.

However, while it is easy to desire this, it is an uphill task to improve the efficiency so as really to make the system work. Numerous factors are responsible for the present situation which does not assure a satisfactory condition. Hardly has any attention to improve the efficiency been taken. An archaic administration which is not geared to accept the challenges of the fast growing structure—both quantitative and in some measures, qualitative too, as the administration of today is in no way better in its form and content than what it was 30 years before. The reasons are known : lack of exposure, absence of training and refresher courses, lack of knowledge of the system or even of one's own institution, lack of motivation, presence of out-dated and unworkable age old rules, absence of well-defined job description, absence of a well-defined reporting system as also sense of involvement and belonging and finally the too heavy structure and a predominantly rules oriented approach of the universities.

Admittedly, today there is nothing that one can talk about which does not have some 'management' element—be it running a department or centre or handling a project or consultancy. Nothing that is mismanaged can be good and everything that is well-managed assures the delivery of goods.

On one hand it is desired that our system should be flexible, modern and forward-looking and our functionaries should be efficient. On the other hand, gradually greater constraints are appearing and more financial difficulties for education are being faced. For a really clean and efficient transformation, unless a package of actions is offered with all support, perhaps we will continue to deliberate without the delivery of goods.

Package for Total Improvement

A package is necessary for total improvement as tackling any one count or on a few out of many counts, cannot bring about the desired improvements. In order to achieve what we have been thinking and talking about in the area of administration to improve the internal efficiency of the institutions, the following need be tackled :

(a) *Structures*

Structures are crucially important for it will be the structures which will provide the approach road to the functionaries of the system. If the approach roads are uneven, ambiguous, aimless, howsoever efficient the functionaries may be, it would not be possible to make any favourable impact. This calls for a study of the structures of the Indian Universities e.g. the Executive Council/Syndicate, Academic Council and in Senate/Court so that by making them workable and flexible, on one hand delay in decision-making is avoided and on the other hand right decision-making is possible.

(b) *Drastic changes in the procedures of administrative work*

This calls for a study to see which are the pockets of post offices without any contributions by the functionaries so that delay is avoided and frustration is reduced. There is already some thinking in this area and if individual universities/institutions take up the study even in a small measure, favourable results are bound to come up and that will pave the way for further improvements in this direction.

(c) *Operational Flexibilities*

Although mentally we all want flexibility in operations, in reality that is not happening as we have still not got rid of the traditional colonial attitude of spending more time and energy to policing as to who is doing what. Instead, while bringing in flexibility, the policing should be converted into a study as to how the flexibility is working so that concerted effort can be made and through that ultimately the desired flexibility can be established.

(d) *Result-Oriented Rules*

Since a bunch of rules that we try to follow and in doing so many a time we either read too much in the rules or at times while interpreting, we interpret wrongly also, it is desirable that simple and result

ented rules are framed for the universities and titutions with certain modific ations in the individ- institutions to suit the need of any peculiar racter of the institutions. For t his, the University ants Commission should appoint a committee and ke them applicable to the universities/institutions ough the central government/state governments. e Kothari Comm ission, in fact, has made the lowing observations in this regard :

"Rules, regulations and techniques that hamper achievement of the real purposes of the university should be modified or scrapped—they should not be allowed to become straight-jackets into which all university activities must be fitted. It would be of real value if in some selected universities, groups of interested and knowledgeable persons, academic and administrative, could join hands to study seriously problems of academic government and administration, and suggest ways and means to bring about a radical improvement in the present somewhat chaotic situation. We recommend that the UGC should encourage the formation of such groups".

More attention to internal machinery

Since the National Education Policy has also cognised that the performance of teachers and students would also improve when the internal efficiency of the institution is improved, it is implied that more attention should be paid to rejuvenate the administration through reorganization, training, and refresher courses so as to create an awareness for efficient work to enable the universities/institutions to achieve the objectives for which they exist.

(f) *Staffing Pattern*

Hardly has any thought been given to the staffing pattern of the administration either in regard to the minimum or maximum workload; in the absence of which on one hand, only a few conscientious workers are over-loaded and on the other hand others who do not care for work and responsibilities keep on overloading the former ones.

These are in general the areas that need be tackled. Each area has its own problems requiring detailed study and it will be only thereafter that concrete solutions could be offered. However, it should be borne in mind that there is no one single model that can apply uniformly to all institutions which though most of them aim at commonly, their characteristic and local conditions would always demand suitable modifications. □

Vokkaligara Sangha Dental College Hospital

(AFFILIATED TO BANGALORE UNIVERSITY)

K R. ROAD, BANGALORE-560 004

Applications are invited for the following posts in different Departments of V.S. Dental College Hospital.

Departments	Professor	Asstt. Professor	Lecturer
Conservative Dentistry	1	2	—
Orthodontics	1	—	—
Oral Pathology/Community Dentistry/Oral Medicine	1	—	—
Oral Medicine/Oral Pathology	—	1	2
Prosthodontics	—	2	2
Oral Surgery	—	1	—
Periodontia	—	1	—
Pedodontics	—	1	2

Essential Qualifications : As prescribed by Dental Council of India for the lecturers post : Only MDS Degree holders should apply.

Pay & Allowances : Pay Scales, DA, HRA & CCA as applicable to Government of Karnataka Employees.

The Last Date of Receipt of Application is **20-12-89.**

The Bio-data may be sent to Principal, V.S. Dental College Hospital, K.R. Road, V.V. Puram, Bangalore-560 004 with a postal order of Rs. 50/- payable to Principal, V.S. Dental College Hospital. Preference will be given to experienced and meritorious candidates.

(Prof. C. Vittal)
Chairman
Governing Council

(Sri Guthala Gowda)
General Secretary

(Prof. Shyam Singh)
Principal

National Literacy Mission and the Andhra University

K.V. Ramana*

The National Literacy Mission (NLM), one of the five Technology Missions, was launched by the Prime Minister on 5th May, 1989. The Programme in Visakhapatnam was inaugurated by the Vice-Chancellor in the Andhra University. The Department of Adult and Continuing Education of the University will act as the nodal agency for the colleges and Resource unit for training and production of literature. It will also help voluntary organisations, Government departments, service clubs, banks, mahila mandals, youth organisations, NCC, non-student youth and women volunteers to spread knowledge of basic literacy, socio-political awareness and functional skills.

It is however necessary to create the will at all levels for the achievement of Mission goals through mobilisation of social forces and creating mechanisms for the participation of people by energising their latent potential with the ultimate objective of promoting qualitative changes in their living and working conditions.

Dimensions of the Programme

The number of illiterates in the country has increased from 91 million in 1951 to 110 million in 1981 and may go up to 116 million by 1991. The Literacy Mission has set its main objective of imparting functional literacy to 80 million illiterates in 15-35 age group : 30 million by 1990 and additional 50 million by 1995. Also the Mission aims at promoting non-formal education of children (8-14 years), school dropouts and leftouts. In Andhra Pradesh also nearly a crore of illiterates in the age group of 6-14 and 15-35 years have to be covered, to make Andhra Pradesh completely literate in the next 5 years.

Functional Literacy

Functional literacy implies (1) achieving self-reliance in literacy and numeracy, (2) sensitizing people to their conditions and better them through organisation, (3) acquiring skills to improve their economic status and general well-being, and (4) promoting the values of national integration, conservation of environment, women's equality, observance of small family norm, etc. With a view to achieve better results, a nationwide network of continuing education through Janashikshana Nilayams and use of developmental departments has to be created. Open and distance learning will have to be popularised on a large scale. The focus of NLM would be on rural areas, particularly women, backward classes, scheduled castes and scheduled tribes. At present only 32 to 35% of school going children complete 5 years of education. The National Policy emphasizes thrust in primary education.

Key Issues

The key issues for the success of NLM are (1) national commitment, (2) creation of a proper environment, (3) motivation of learners and teachers, (4) mass mobilisation and peoples' involvement, (5) techno-pedagogic inputs, (6) efficient management and monitoring, and finally (7) evaluation, feedback and research.

Strategy

The NLM requires better motivation through functional education, skill development, economic activity, promoting health, recreational, cultural activities, jathas and better use of media, youth training and development centres and Village Education Committees (VECs). For promoting this 2000 to 2500 volunteers will be trained each year who will do whole time/part time work as National Service Volunteers and will carry out literacy/non-formal education as instructors/supervisors and function as activists for education.

Mass Literacy Campaigns

The most important strategy being adopted by various states like Karala, Karnataka, Gujarat, Maharashtra, Tamilnadu and Andhra Pradesh is to promote mass literacy campaigns of 3 to 4 months' duration. Under this each student volunteer of High Schools, Junior and Degree Colleges will teach upto 5 illiterates in the age group of 6-14 years. In the case of college students they will teach illiterates of the age

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group 15-35 and beyond 35 years. Each student will each either at his own home in case of illiterate parents, brothers and others or in the neighbourhood, on a verandah or a room or Rammandir, Panchayat or school building which ever is convenient for him and for the illiterate learners. This task of teaching can be taken up by non-student youth also. They may belong to a youth organisation or mahila mandal. They can teach in their individual capacity. From each school, college or youth association one or two Master Trainers will be trained by the University. Each school, Upper Primary/High School/ Junior Degree College should identify an area in their vicinity to carry the mass campaigns in two successive batches August to December and February to June. There will be a period of testing in the last 15 days and convocations will be held locally to present certificates to the learners and to reward the instructors and Master trainers.

Role of Andhra University

The Department of Adult & Continuing Education since its inception is in the forefront in promoting, nurturing and carrying evaluation studies and research in the fields of literacy, adult education, non-formal education, continuing education, population education, rural development and popularisation of science among the masses. The adult literacy project in Bhimili under the auspices of the Andhra Mahila Sabha was the first project to be taken up in 1978. The project made an impact in raising literacy rates from 8 to 20%.

Under the National Adult Education Programme (NAEP), the Department ran 60 Adult Education Centres for 5 years. This work was carried on with the cooperation of Department of Social Work and NSS of the University. During the year 1988-89, 120 centres were run in the Visakhapatnam City. 1956 adults were made literate in the Steel Plant area and in fishermen colonies around the City. It is reported that some 50 displaced persons secured jobs in Visakhapatnam Steel Plant thanks to their attainment in literacy.

Under the Mass Programme for Functional Literacy (MPFL), a two-day programme was held in May, 1988 in which Principals and Programme Officers of NAEP and NSS were oriented to take up MPFL in a big way during 1988-89. Follow up meetings were held by both the Adult Education and NSS functionaries in the various districts and good progress was achieved during 1988-89. 3,700 kits were supplied to the students of 20 affiliated colleges and the volunteers have educated 4,000 illiteraters. This is under the non-NSS scheme. Under NSS nearly 6,000 illiterates were covered through 80 Degree and Junior Colleges. Special emphasis is being laid on this work.

3,000 volunteers in Srikakulam District conducted a mass rally on May 5, 1989 i e., the first anniversary of NLM and took pledge that "Each one will educate 5 illiterates" and thus eradicate illiteracy in their villages.

The University through its various departments has been organising mass campaigns in the coastal region. It is proposed to train 200 Master Trainees drawn from different schools/colleges who in turn will train student volunteers in each school/college. Each student is expected to teach two or three illiterates of 5-14 years or 15-35 years. A mass campaign of this nature is expected to spread to the rural and tribal blocks of the District by the end of October, 1989. The University Department of Adult Education has published a number of books and literature useful for this activity. The Nucleus Cell recently established in this University with the help of a grant from the Ministry of Human Resource Development is preparing brochures, pamphlets, banners etc. which will be used for creating conducive atmosphere. The Cell will also undertake training of NSS and non-NSS volunteers in the colleges affiliated to the University. Thus the programme of NLM is in full swing in the Andhra University and we hope to create a dynamic literacy network to remove illiteracy in the coming months and years. □

TO OUR READERS

Knowledgeable and perceptive as they are, our contributors must not necessarily be allowed to have the last word. It is for you, the readers, to join issues with them. Our columns are as much open to you as to our contributors. Your communications should, however, be brief and to the point.

Effective Classroom Management in Higher Education

Sunil Behari Mohanty*

Classroom management is concerned with "the set of teacher behaviour and activities that are primarily intended to foster student cooperation and involvement in classroom" (Enner 1987, p. 437). An effective teacher is not only master of the subject knowledge but also master of classroom situation. He/she knows how to handle the class for effective learning of the students. An effective teacher possesses certain essential informations and skills.

An effective teacher knows well about the learners. Different informations necessary for the teacher are (a) reasons for getting enrolled, (b) motivation, (c) intellectual ability, (d) reactions to the personality of the teacher, (f) sense of confidence and independence, and (g) physical and emotional health conditions, etc. Gage and Berliner (1984) referred to two groups of students who require attention of the teachers. These are (a) students exhibiting too little behaviour of desirable kind, and (b) students exhibiting too much behaviour of undesirable kind. The former group exhibits characteristics such as failing to pay attention, failing to show interest in work, inappropriate interaction, truancy, lethargy and too much dependency. The later group exhibits characteristics such as physical aggression, inappropriate movement around the classroom, making inappropriate noise, inappropriate challenge to authority, and making destructive criticisms and complaints. Undesirable behaviour exhibited by the students in the classroom may be also due to home conditions, social factors, political factors and previous school experience. A student who is punished at home may show undesirable behaviour at college as part of displacement mechanism. The nature of the society in which a student stays also influences his behaviour. Political parties try to influence students to attain their goals at the cost of the students' study skills. When the voting age has come down to 18 years of age, some political parties may become more interested in involving students more in politics than in studies. Some students might have been oppressed at school stage. They might have been subjected to corporal punishment. Schools generally do not give freedom to children to raise their grievances. When these types of students come to college, they may like to take advantage of the free atmosphere and create disturbance for the sake of pleasure. An effective classroom management technique has to take into consideration the above said factors concerning students.

The teachers also unknowingly contribute to student indiscipline and ineffective classroom management. Katz (1962) reported that student achievement was influenced by the personality and the manner of dealing of the teacher. Some of the important factors are (a) inadequate information about students and their backgrounds, (b) inappropriate perception of student behaviour, (c) inadequate monitoring of student behaviour, (d) authoritarian handling of classrooms, (e) poor communication skill, (f) lack of mastery over the content area, (g) poor moral standard, (h) inappropriate teaching skill, (i) bias such as girl vs. boy, nice looking vs. average looking, more able vs. less able, front bench vs. last bench students, etc. A good teacher has to be aware of these factors and has to be careful that the classroom management is not affected by these.

Useful Strategies

The classroom management teachniques are varied in nature. According to Schmidt (1984) these are developmental contextually dependent, individual and group centered, dependent more on rewards than on punishment and are dependent on the social needs of the students. Hence, there cannot be a complete prescription. Singh (1986) while discussing about methods of teaching at colleges pointed out that no single methodology could be always useful. Similarly various approaches of classroom management techniques need to be carefully considered by the teacher and used only in appropriate places. A technique found effective in one situation may not be effective to the same extent in another situation.

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(a) *Knowledge of students and their backgrounds*

An effective teacher knows the names of students, their parents, their home conditions, their previous academic abilities and their expertise in various curricular and co-curricular activities. The knowledge of the name of the student is helpful in controlling the students. In case of a student found unattentive in the classroom announcement of his name by the teacher may make him restrain himself from making disturbance. The mischief makers are afraid of the teacher who has acquaintance with their family members. Hence knowing of the names of students and keeping contact with their family members help classroom management.

(b) *Mastery over content area*

All good classroom teachers have mastery over the content taught by them. The student are experts in knowing the level of knowledge a teacher possesses. Generally they respect the knowledge. The University Education Commission 1948-49 states that :

> "No teacher who is not a master of the field, who is not in touch with the latest developments in his subject and who does not bring to bear upon his duties a free and untramelled mind will ever succeed in inspiring youth with that love of truth which is the principal object of higher education."

The students are found to create no problems in classes of eminent scholars. All teachers should strive to become eminent scholars as a necessity for effective classroom management.

(c) *Appropriate Methods of Teaching*

An effective classroom management involves use of appropriate methods. The participatory methods are found to be very effective in making all students interested in the lesson. A method suitable for one topic may not be so for another. A good teacher knows the suitability of a method for a topic. Sometimes students create problems dus to inappropriate methods. The teachers need to take stock of the level of the students and the material resources available at his disposal and decide the best method suitable for teaching a topic that can elicit maximum student participation. The best methods make the teacher take the role of a guide and a helper. According to Sri Aurobindo, "The first principle of true teaching is that nothing can be taught. The teacher is not a task master but a helper and a guide. His business is to suggest and not to impose". The teachers following these principles are sure to be good in classroom management. Involvement of students will provide less scope for mismanagement.

(d) *Withitness of the Teacher*

The term 'Withitness' was used by Kounin (1970) to indicate promptness in identifying disruptive behaviour in classrooms. This promptness of the teacher may be described as observing through an eye at the back of the head. All teachers need to possess this ability, so that even while writing on the blackboard turning their back to students, they can have a grasp of what is going on in the classroom. All teachers do not bother about classroom happenings. Mohanty (1989) reported about his observation of a few classroom situations in a degree college. He reported that 10 per cent teachers were unconcerned about the sleeping of students in the classroom, noise in the classroom and physical movements of students in the classroom for making mischief. The University Education Commission suggested that all teachers should keep their eyes on the student audience to have an estimation of the extent to which the students are following the classroom teaching. There are some teachers who do not look at the students. Mohanty (1989) reported about a teacher taking a language class, reading a poem and explaining it for 40 minutes without having any dialogue with students, without looking at them and without making any physical movement and all the while standing like a statue at a place. In such a situation obviously students were found not interested in lesson and some of them had a free time. Hence all teachers need to develop the habit of developing withitness and immediate tackling of disruptive behaviour.

(e) *Purposeful witholding and focussing of attention*

Withitness referred to promptness in identifying behaviour. But the teacher has to decide whether to pay attention to such a disruptive behaviour or not. Tanner (1978) reported that extinction approach—purposeful witholding of attention could be helpful in case of the undesirable behaviour that was momentary, not serious, not dangerous and found in case of students who are generally well behaved. Too much of focussing of attention on disruptive behaviour may hamper progress in teaching. For instance, chance talking among grown up girls may

be due to certain physical happenings such as menstruation, etc. about which they may not say even if asked by the teacher. The teacher has to decide when to interfere or not to interfere. They should give negative attention to disruptive behaviour and positive attention to desirable behaviour keeping in mind the progress in teaching to be achieved. When a large number of students get affected by a disruptive behaviour, the teacher is bound to halt, look into the problem, take appropriate measures and then progress. Seaborn (1985) referred to the redirection of attention away from unacceptable to more acceptable behaviour. The teacher need to be tactful in making students reinterested in the lesson, after a pause for disruptive behaviour in the classroom.

(f) *Appropriate use of reward and punishment*

Good behaviour is reinforced by rewards and bad behaviour is expected to be curbed by punishment. But the latter does not work in many cases. Punishment may not be given unless it is absolutely necessary. In case of college students, punishment may generate reaction that may lead to physical assaults. It may develop in students a negative attitude towards the teacher. Soft reprimands along with praise for the qualities that a mischief maker student possesses may be helpful. Sometimes teachers give early rewards so that some students may exhibit better behaviour in classrooms. Before taking recourse to penalty measures, good teachers try to find time to contact parents or guardians of the concerned students and make them help in developing desirable behaviour in students. Thus reward and punishment need to be used judiciously and punishment to be given only when no other avenue is available.

(g) *Use of Humour*

Use of humour in appropriate places has been found to help develop better climate in the classroom. Dritz (1983) reported that use of humour helped development of positive teacher-student relationship, provided motivation to learn creatively and helped in reducing tension. Fontana (1985) also reported about usefulness of humour reducing the barriers between teacher and class. However, humour should not be overdone. All effective teachers use humour appropriately.

(h) *Use of Questions*

Questions are very effective in making class attentive. The teacher may also invite questions from students. Questions are of various types. The effective teachers vary their questioning styles to make the class lesson interesting and make the students attentive. Sometimes the questions are put to the class, then a student is pointed out to answer. Some teachers first point out the student and then put the question. The teacher has to decide which will be suitable at that classroom situation. Inviting questions from students as well as student answers provide feedback to teachers.

(i) *Sensitiveness to Student Recsponses*

The effective teacher should be sensitive to answers given by students to teacher questions. Correct answer should be reinforced by praise. Both verbal and non-verbal techniques are used to make the student know the teacher approval and praise. If the class is not in a mood to proceed in the manner previously planned by the teacher, the teacher should change the manner of presentation of the subject matter accordingly. He should be flexible.

(j) *Fairness in Dealing*

Good teachers are fair in their dealing with students. They avoid any bias. If by chance, they do not have control over any bias, for instance giving more attention to bright students, they may write it on their desks so that in course of teaching, whenever their eyes fall on the writing, they can make correction.

(k) *Democratic Approach*

Democratic approach is an essential tool for effective classroom management. The authoritarian teachers are bound to fail in handling classroom situations. Good teachers discuss their scheme of work with students. They also discuss the methods of teaching they may utilise for teaching various topics. They assign roles to students for effective teaching. They take the view of the class in maintaining classroom atmosphere. Brown and Thornton Jr. (1963) pointed out that good teachers are permissive and relatively undemanding. They should be relaxed, have self-control and patience in handling classroom situations.

Conclusion

Some of the classroom management strategies are given above. There are a large number of strategies.

teacher, if conscious in his or her work, will tomatically become aware of these strategies and ilise them to improve the classroom atmosphere. hese techniques are developmental in nature. Hence e strategies will become stronger in course of time. he teachers need not be disheartened when these rategies fail. The classroom behaviour of students also influenced by external factors over which achers have little control. The new college teacher an benefit much by observing classroom activities f his senior colleagues. He or she may also gain by bserving their activities both inside and outside lassrooms. All senior colleagues may not be effective teachers. He or she has to carefully select them or modelling his or her own behaviour. □

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(A) AT THE NATIONAL INSTITUTE OF CHOLERA & ENTERIC DISEASES, CALCUTTA— Dy. Director (Immunology)—(One post) Scale of Pay of Rs. 4500-150-5700.

Qualifications & Experience : Essential : (i) MBBS/ 1st class M.Sc. in Bio-Science with 12 years experience in research/teaching in Immunology and Molecular Genetics **OR** M.D. (Microbiology)/Ph.D. in Bio-Science with 10 years experience in research/ teaching in Immunology and Molecular Genetics. (ii) Substantial research contributions in the field of Immunology and Molecular Genetics evident by original publications in reputed journals.

Job Requirements : (i) To participate in planning and implementation of multi disciplinary studies as well as collaborative studies both at the national and international levels in various aspects of Immunology and Molecular Genetics in the field of diarrhoeal diseases. (ii) To formulate research projects and to guide Postgraduate students. (iii) To carry out research project as per the recommendation of the SAC.

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Application forms can be obtained from the office of the Director General, Indian Council of Medical Research, Ansari Nagar, Post Box No. 4508, New Delhi-110 029. Forms duly completed should be sent to the Director General, Indian Council of Medical Research. Ansari Nagar, Post Box No. 4508, New Delhi-110029 with a crossed IPO for Rs. 8/- payable to the Director General, ICMR, New Delhi. SC/ST candidates are exempted from this payment. Incomplete and late application or without postal orders will not be entertained.

How To Test Architectural Aptitude ?

K.S. Anantha Krishna*

Aptitude tests are being increasingly relied upon or selecting students to both undergraduate and ost-graduate courses, especially in professional olleges. We have aptitude tests for engineering, edicine, management and for other disciplines. here are two main reasons for this trend. There as been a gradual erosion of faith in the possibility f the examination marks serving as a reliable index f students' intellectual abilities. But more imporantly, there is a growing realisation that appropriate ental abilities and skills are a pre-requisite for the uccessful pursuit of any branch of arts, science or echnology. In this respect, selection of students for rchitecture studies poses an interesting problem. tudents specialising in physics, chemistry and mathematics at the 10+2 (pre-University) level are eligible for admission to this course. However, his course not only demands basic scientific nowledge, which is what is imparted at this level, ut also requires artistic skills which do not normally orm a part of the curricula. Hence, it becomes mperative to conduct an aptitude test which assesses he creative faculties of students seeking admission. n fact, almost all reputed educational institutions do select students on this basis. However, there is considerable variation in the contents of the tests administered in these colleges. There has been some discussion and debate about the composition of such ests from the point of their accuracy in the assessment of architectural aptitude. What follows is an attempt to arrive at a format for a comprehensive package of items which together assess the aptitude with some accuracy.

The format which we may arrive at should obviously be related to the qualities or attributes which we may expect in an aspirant for admission to the architecture course. These attributes are, in turn, dependent on the nature of the tasks performed by the professional architect. One of the greatest strengths of an architect, in fact considered as his forte, is his ability to innovate and create three-dimensional forms which are visually pleasing. To master this ability, one must be sensitive to the visual qualities of various forms and shapes and should be able to carry out mentally various permutations and combinations of such forms and shapes before arriving at a satisfactory combination. We can think of three interrelated skills which an aspiring architect must possess for this purpose. These may be termed as aesthetic sensitivity, visualisation and spatial thinking and geometry.

Aesthetic sensitivity can be assessed in the following ways. Wooden or plastic models of a number of geometrical figures such as cubes, cylinders, spheres, pyramids and prisms could be given and the candidates asked to group them together in a given timeframe. It is to be expected that students high on this attribute will come out with complex and unique arrangements. Instead of models, cut pieces of these figures could as well be provided and the students instructed to stick their final grouping on to a drawing sheet. Another way of testing consists of presenting a rectangular or a square figure which is divided into a number of small squares and asking for the formation of a pattern by hatching or colouring some of these sub-divisions. The pattern formed may be evaluated for its complexity and innovativeness.

An architect has to visualise beforehand how various parts of a building, having different forms, are interconnected. This requires comprehension of complex interlocking arrangements of different forms and shapes. To test this ability in prospective architects, two-dimensional views of objects of varying visual complexity may be presented and corresponding three-dimensional views required to be drawn. Another related method involves giving a three-dimensional view of a group of objects and instructing the candidates to rotate mentally one or more of these objects and draw the changed view of the group. The responses may be assessed for the correct picturisation of the changed view as per the instructions. Visualisation ability also includes understanding how solid objects can be formed by folding appropriate two-dimensional figures. Three or more developments, out of which only one gives the correct representation of a solid object, may be given and the respondents asked to tick the correct one corresponding to the given object. The responses to a number of such exercises for different objects will be indicative of the ability to visualise the formation of three-dimensional forms. Students may also be required to depict, by means of sketches, visual pro-

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perties like symmetry, balance, rhythm, contrast, stability, etc. Memory drawing is another technique which illustrates visualisation capacity. Common objects experienced in daily life like chairs, tables, post boxes, fans, electric poles etc. may be asked to be drawn from memory. An alternative to this would be to show to the group of students writing the test, simple patterns consisting of dots and lines, one at a time, for a short interval of time such as a minute. After each minute of exposure two minutes may be given for reproducing the pattern just shown.

Skill in spatial thinking and geometry involves the ability to understand and analyse complex geometrical patterns. The candidates may be presented with patterns of superimposed geometrical figures, asked to identify the underlying figures and explain the basis of superimposition in each case. A related exercise consists of obtaining the preferences of students for interlocked geometrical figures of varying degrees of complexity. It may be expected that students with an aptitude for spatial thinking prefer complicated and unique figures to simple and commonplace ones.

Sensitivity to perception of colours is an essential aspect of architectural aptitude. It is therefore very important that a student with colour blindness or similar visual deformities is not admitted to architectural studies. A simple task like identification of primary and secondary colours presented inside rectangular boxes will help in ruling out this possibility. Exercises requiring colouring of three-dimensional views of landscape, buildings, etc. will help in assessing the suitability or otherwise of colour preferences indicated. The candidates may also be asked to suggest matching the contrasting colours for any given colour.

Until recently at least, skill with pencil was an undisputed quality expected of an architect. A gradual shift in emphasis towards computer graphics and computer aided drafting is noticeable in recent years. Nevertheless free hand drawing skills are still a coveted asset in an architect. This may be tested in a simple manner by an exercise which involves free hand enlarging of a given sketch which may comprise of landscape, buildings and human figures. An alternative test may involve presenting an interesting assemblage of objects like an ornamental vase with flowers kept on a platform and requiring the assemblage to be drawn as seen from the view-points of various students. Shading of the objects may also be required to be done.

An architect must be able to put across his ideas convincingly to the client, whether it be an individual or an institutional one. Effective communication, both written and verbal, is a necessary pre-requisite for an architect's success. Capacity for written communication may be tested by exercises involving the description of a built environment like a street scene, an interesting building or even a market place. Verbal communication, perhaps is even more important than written communication because, more often than not, building schemes are explained to a client or a group of clients by verbal means. Verbal ability can be assessed in a face to face interview with the student, which may be conducted after the written test.

The interview also helps to acquaint the teachers about the tastes and hobbies of the prospective student. A clear cut bias towards the fine arts like painting and sculpture and hobbies of reading and writing of poetry and literature will be a plus point. Proven artistic merit in the form of awards or prizes won in competitions will be a favourable attribute. All other things being equal, preference may be given to students hailing from architects' families. Such a background will help in providing the student a good exposure to architectural thought and practice even in the domestic environment.

The format suggested above, is obviously in the form of an outline and suitable details may have to be worked out before administering it to students. The relative weightages to be given to the various components may be decided by the concerned college depending on its emphasis on parti cular aspects. For instance, a college stressing on re ndering techniques may give more weightage to free hand drawing exercises and colour perception tests while another with a bias for verbal skills may give a higher rating to the performance in the interview.

Sant Darbara Singh College of Education for Women

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Dr. (Miss) Govinder Kaur Sidhu
PRINCIPAL

Dayalbagh Educational Institute

Mr. Justice G.D. Sahgal (Retd.) President of the Dayalbagh Educational Institute delivered the Convocation Address at the eighth annual convocation of the Institute. In his address Justice Sahgal charted the course of growth of the Dayalbagh Educational Institute from its small beginnings and thus exhorted its alumuni : "Your conduct, manners and dedication and devotion with which you perform your duties should impress all those with whom you come in contact and they may mark you out as persons having received your education and training in a first rate institution." Excerpts

The seeds of the (Dayalbagh) Institute were sown on the 1st of January, 1917 by the Most Gracious Huzur Sahabji Maharaj, the Fifth Revered Leader of the Radhasoami Faith by founding a co-educational Middle School with only 90 children on its rolls drawn from all parts of India and a few teachers similarly drawn from different parts of the country, who had come here at considerable sacrifice of their careers outside for setting up an educational institution which may mould young men and women to be 'Supermen' of tomorrow.

The Middle School itself through the High School and Intermediate stages steadily grew into a Degree-cum-Training College and was, on the day the Dayalbagh Educational Institute was declared to be an institution 'Deemed to be a University', a premier College affiliated to the University of Agra. The original co-educational institute ceased to be such when Prem Vidyalaya, a Girls' School was founded in 1930 which later on was raised to the status of an Intermediate College. A Technical College was founded in the year 1928 as the first Institution of its kind in Uttar Pradesh. A Women's Training College which later grew into a Degree and Postgraduate College and became a leading Institution of the country for the education of women and was known for its efficiency and smart turnout, was started in 1947. Lastly an Engineering College of Degree standard came into being in 1950. These institutions and many others, such as the Leather Working School, a School of Languages and the School of Art and Culture and also a Play Centre cum Nursery School came into being from time to time.

In the year 1973, being encouraged by the progress of these institutions those who were Incharge of the education in Dayalbagh thought it fit to bring them under one umbrella to cordinate their activities and gave it the name of Dayalbagh Educational Institute. A scheme of comprehensive education with emphasis on vocational and work oriented course was prepared and submitted to the State of Uttar Pradesh and through them to the Ministry of Education in the Government of India and the University Grants Commission who on enquiry made by a Committee recommended to the Government for the formation of this Institute as an Institution deemed to be a University on the amalgamation of the three Degree Colleges namely the Boys' Degree College, the Women's Training College and the Engineering College into five faculties as they now exist. The institute was later authorised to take over the other educational institutions in Dayalbagh also and as a result thereof the Technical College has already been taken over and shortly the Institute may be able to take over the Intermediate College also by and by with the result that all the educational institutions will after some time come under the same umbrella as envisaged by the founders of the Dayalbagh Educational Institute. The enquiry committee appointed to examine the feasibility of recognising the institute as an Institution deemed to be University reported, to use their own words. "In its meeting with the authorities of the Dayalbagh Educational Institute and the students and the teachers of the three University level colleges, the Committee felt that all the students and teachers and the management are deeply committed and dedicated and are also most enthusiastic about the proposed innovative educational programme".

With this background the Institute was given the status of an Institution deemed to be a University in 1981. The dreams of

e founding fathers are enshrined the following aims and objects f the institute, among others as ncorporated in the Memorandum nd Bye-Laws of the Institute.

"To bring about physical, ntellectual, emotional and ethical ntegration of an individual with view to evolve a complete man ossessing the basic values of umanism, secularism and demo-racy capable of giving a fuller esponse to social and environ-mental challenges and having a trong character and high ethical standard,

'To organise and impart edu-cation of excellence as well as contemporary relevance,'

'To create willingness and capacity to work with one's own hands which would instil respect for 'soiled hands' and the dignity of labour, as also generate a spirit of self-reliance,'

'To promote the study of cultural heritage with a view to develop pride in the national ethos so that one may not lose one's moorings,'

'To cultivate an understanding of various beliefs and faiths and thus to ingrain an attitude of tolerance and sense of national unity; to engender the spirit of Brotherhood of Man to facilitate the establishment of a classless and casteless Society, and to infuse a spirit of humility, simple living, selfless service and sacrifice,'

'To promote temperance and principles of non-violence and ahimsa."

Such being the history and the aims and object of the foundation of your Institute, it is but right and proper and in the fitness of things that it expects of you to exhibit those qualities by your conduct throughout your life for the inculcation of which it was founded and to fructify the dreams of the founders of the Institute to prove to be true.

The question now is as to how this ideal can be translated into practice.

In the first place, whatever duty is allotted to you in any walk of life, you should perform it with earnestness, dedication, sincerity and devotion without caring for your own selfish interests. Whenever you have to take any decision, you place your institution in your mind and ask yourself the question whether what you are going to do will be in consonance with the ideals of the institute where you have received your education or will injure its reputation. Whatever you do should be done with a sense of mission and in all humility making 'nulli secundus' your motto. Your conduct, manners and dedication and devotion with which you perform your duties should impress all those with whom you come in contact and they may mark you out as persons having received your education and training in a first rate institution.

You may well remember that man does not live by bread alone. Bread may be necessary to sustain the physical body but besides the physical body there are other elements also which constitute the full personality of a human being and they are sustained by practicing certain values which I have just referred to above.

There is yet another matter I would like to place before you. If by the Grace of God you are placed in a place of authority under which you have to take work from a band of subordinates, instead of ordering them in a cold blooded manner to perform their duties as if you are different and superior to them you should always say, whenever any work is to be done, "Come let us do this work" so that it may give them a feeling that you are one of them and part and parcel of the organisation to which they and you both belong. This will to a great extent take the sting out of the unpleasantness that we find today between the superior and the inferior, the employer and the employed. □

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Science & Technology for National Development

Cooperation and sharing of information both nationally and internationally is not only possible but should be encouraged as it is mutually beneficial, based on reciprocity and respect for each, other, said Professor M.M. Sharma President of the Indian National Science Academy (INSA) while delivering the presidential address on the opening day of a three-day international seminar on "Science and Technology for National Development : International and Regional Cooperation" held in New Delhi recently.

Prof. Sharma said that there were numerous fields in science and technology where cooperation was possible. However, it was necessary to ensure that no caveats were imposed on sharing of knowledge and information as these tended to act as dampeners. According to him, science and technology could be valuable sources of capital especially for developing countries for whom buying technology meant depletion of capital.

Science and technology could also be valuable instruments to extract more out of existing assets. The tenets that could guide cooperation in these two fields was mutual respect for each other, and reciprocity. Some of the strengths of developing countries were, the high-calibre of their scientists, and research which was less expensive. However, some of the drawbacks in these countries were technology that was not very advanced, and poor maintenance of scientific equipment.

Citing an instance where worldwide cooperation benefited mankind, Prof. Sharma said that small-pox was eradicated because nations cooperated. He asked why a similar attempt could not be made to eradicate other diseases such as leprosy, tuberculosis, and malaria. After all, the virus does not recognize any frontiers, he said.

During the opening session of the seminar Dr. D.S. Kothari, an eminent scientist and former chairman of UGC, spoke on "Science and Technology and Concern for the People". In the present century science, technology and productivity were closely interlinked. However, these three, by themselves, were not capable of generating and ensuring national development, said Dr. Kothari. For that, what was needed was a real and passionate concern for people, especially the poor and the underprivileged, he added.

According to Dr. Kothari, the key issue in national development was to integrate science, technology and productivity in a manner beneficial to the people. Along with advances made in the fields of science and technology, there was also growing dehumanization and decay of humaneness. It was a tragic fact. Dr. Kothari said, that worldover, development of science and technology was directed towards developing means to kill.

The scientific community had a special role and obligation towards people so that science was used for the benefit of mankind. Promotion of effective concern for the people, Dr. Kothari said, was the foremost task of education at all levels. Apart from concern for the people, some other issues that were of interest were the prohibitive cost of books and journals on science and technology, reforms in the way science and mathematics is taught in schools, and the integration of school education with the revolution in the fields of biotechnology and computers.

M.Tech in Atmospheric Science

Calcutta University has started a centre for conducting M.Tech courses in atmospheric science. The session will have a duration of one and a half years. The UGC has sanctioned certain recurring and non-recurring grants for the course including the teaching and non-teaching posts for a period of five years.

The course includes a bridge course, observational technique, general circulation and climate, physical meteorology, a laboratory course, fluid mechanics, fundamentals of dynamic meteorology, advance dynamic meteorology, internship, project and dissertation.

In addition to these compulsory courses there are a few elective courses, namely, air pollution and atmospheric chemistry, hydro/meteorology, numerical weather prediction, etc.

Ford Grant for Gokhale Institute

The Ford Foundation has made a grant of $ 3,40,000 (approximately Rs. 50 lakh) to the Gokhale Institute of Politics and Economics, Punc. Out of this (i) an amount of $2,30,000 is a contribution to the capital fund of the institute, the income from which is expected to support on a permanent basis new staff positions of one Professor and one Lecturer in International

Economics, a senior Librarian and library acquisitions, and (ii) a grant of $ 1,10,000 is meant to support for a period of five years research activities, data processing and related services. This component of the grant also envisages support for instituting Ph.D. fellowships and research assistantships in international economics and related areas.

The institute has, over the years, developed considerable expertise and has made indepth studies in the fields of agricultural economics, demography, economic planning, money and finance. Some research and training in international economics was also being carried out at the Institute.

The Institute plans to take up the following projects under this grant:

(i) A study of India's balance of payments;

(ii) Preparation of a monograph on macro-economics of India; and

(iii) An evaluation of the relative efficiency of the Indian, stock market including a comparison with the major stock exchanges of the world.

In addition, it is proposed to organise a workshop on Open Economy Macroeconomics in which scholars from India and abroad will participate. Three other seminars to discuss the findings of the above mentioned research projects are also proposed to be arranged.

Nature of Drug Abuse

Dr. S.C. Bhatia. Secretary, Indian University Association for Continuing Education, stressed the need to have a sound research base to enable the society to understand the nature of drug abuse while delivering the keynote address at a UGC sponsored regional seminar on "drug abuse and educational rehabilitation of parents and students" organised by the Department of Adult and Continuing Education of Madras University. He said most students took to drugs due to pressure from peer groups and this aspect of the problem had to be studied. Alienation from the family vis-a-vis the school and college made students vulnerable to all kinds of pressures.

Dr. A. Gnanam, Vice-Chancellor, Madras University, who presided, hoped the seminar would find out educational methodologies to combat drug abuse at the tertiary level itself. Drug abuse was due to certain inherent weaknesses in the human system which sought escapist routes to various problems. He said there were three major groups of drug abusers—those who tried it out as an experiment, the psychological abuser and the addicts. Ways to combat the physiological and physical effects of habit-forming had to be found. The habit-forming system of the human body could be rectified with appropriate alternatives, he said.

The Government of India was interacting with the United Nations Fund for Drug Abuse Control (UNFDAC) on a major programme of law enforcement. The UGC was brought into the programme as many of the addicts were in the 16 to 22 age group.

ALL INDIA PRE-MEDICAL/PRE-DENTAL ENTRANCE EXAMINATION, 1990

The Central Board of Secondary Education (CBSE) will conduct the All India Pre-Medical/Pre-Dental Entrance Examination on Sunday, the 13th May, 1990. As per the directives of the Supreme Court of India, this will cover 15% of the seats in all the Medical/Dental Colleges in India except the States of Andhra Pradesh and J & K. In case the candidates belonging to Andhra Pradesh and J & K claim eligibility for this examination they have to submit an affidavit to the effect that they are not eligible to seek admission in Medical/Dental colleges of Andhra Pradesh and J & K and they are not domiciled in Andhra Pradesh and J & K.

This examination will be held at centres which will be fixed by the CBSE. They will be located in the capital cities.

Candidates must be Indian nationals with a minimum age of 17 years on 31st December, 1990. They must get more than 50% marks in English, Physics, Chemistry & Biology at the plus two stage or equivalent examinations conducted by Boards/Universities. The candidates who are taking the +2 examination in 1990 can also appear at this examination provisionally, subject to their fulfilling the conditions later.

The Bulletin of Information and application forms will be available in the second half of January, 1990.

ASE Award for Prof. Yash Pal

Prof. Yash Pal, Chairman of the University Grants Commission said that sincere efforts being made in the field of space technology would promote peace in the world and make this planet a comfortable place for living. He was addressing the Fifth Planetary Congress of the Association of Space Explorers (ASE) in Riyadh in Saudi Arabia where he was conferred with this year's ASE award for his contribution to space technology. He said. "I believe what I felt three or four years ago has proved to be much pessimistic. I see a major change. A new way of living is apparent."

"Missiles have been dismantled in large numbers. The scenario of nuclear reactors has suddenly receded. The fences between countries are being lowered. It is clear, the people of this world will not allow a nuclear catastrophe. A new image of thinking is beginning to emerge", he said.

Referring to the advancement made in space technology, Prof. Yash Pal said space travellers—astronauts, cosmonauts and space scientists—have reason to be grateful that "you and others have been active in working during the last three decades on peaceful space exploration programmes".

Previous recipients of the award included Soviet academician Oleg Gazenko and American professor Gerard O'Beill for their pioneering work directed towards space civilisation in 1986, former NASA administrator Dr. Thomas O. Paine Jr. for his vision and commitment to the next generation in space (1987) and Soviet academician Boris Raushenbakh for his contribution to space evaluation in 1988.

Orientation of College/ University Teachers

The Academic Staff College of Himachal Pradesh University recently organised its first orientation course for teachers. Inaugurating the course Prof. K.C. Malhotra, Vice-Chancellor of the University said that there was an urgent need for teachers' training and orientation at college and university levels particularly with the objectives of imbibing teaching skills, developing wholesome personality of the teachers and preparing them to face the challenges of emerging society.

In the orientation process, both formal and non-formal techniques of teaching and training were utilised. The modern teaching techniques were intensively used. A special emphasis was laid upon learning by 'doing' and 'interaction'. The participants were encouraged to participate in the discussions, management of the programme and undertake group assignments.

Monitoring and evaluation was continuously taken up on various measures such as class participation, assignment work, group-assignment, quiz, debate, punctuality, co-operation, etc. For carrying out improvements in the future programmes and measuring the effectiveness of the programme, the participants were asked to rate the programme and rank the resource persons on certain valid criteria.

Shri M.K. Kaw, Financial Commissioner-cum-Secretary Finance, Government of Himachal Pradesh who delivered valedictory address, suggested systematic efforts for professional type of orientation for success of an individual in any profession.

The four-week programme was attended by 22 teachers belonging to various institutions and the prominent among the resource persons were Prof. D.B. Desai, M.S. University, Baroda; Prof. K.C. Malhotra, Vice-Chancellor, H.P. University; Dr. M.L. Mehta, Additional Secretary, University Grants Commission; Prof. M.A. Zaheer, Deptt. of Business Management, Punjab Agriculture University, Ludhiana; Prof. A.C. Pal, Allahabad; Prof. C. L. Kundu Director, Academic Staff College, Kurukshetra; Dr. V. P. Rao, Fellow, Indian Institute of Advanced Studies; Prof. V. R., Taneja (Retd); Dr. Suri, Indira Gandhi National Open University New Delhi.

Import of Educational Books Liberalised

The Government of India is reported to have liberalised the policy for the import of educational, scientific and technical books subject to certain conditions under Open General Licence (OGL). These can be imported by certain institutions and professionals. So far as educational, scientific and technical journals, news magazines and newspapers are concerned, these can be imported by anyone.

According to a public notice issued by the Chief Controller of Imports and Exports, the categories of eligible importers for educational, scientific and technical books are universities and recognised educational and research institutions; public, national and state libraries; institutions of higher learning; recognised publishers and booksellers having a minimum annual sales turnover of Rs. 5 lakh; research and development units of industrial establishments; and professionals like

scientists, doctors, engineers, university professors, advocates, chartered accountants, etc. for their own professional use provided the c.i.f. value of imports by them will not exceed Rs. 10,000 in a financial year.

Publishers and booksellers shall, at the time of clearance of the goods, produce to the Customs authorities the original or a photocopy thereof (currently valid) of their registration under the Shops and Establishments Act, or evidence of membership of one of the professional associations of publishers/booksellers. A certificate from chartered/cost accountant or company secretary who is not a partner, a director or an employee of the firm or its associates, indicating the annual sales turnover of books shall also be required to be produced.

Educational and research institutions, institutes of higher learning and public libraries shall produce to the Customs authorities at the time of clearance, evidence of their recognition by Central or State Government or University, as the case may be, and a declaration to the effect that the books imported are for their own use. Privately funded research institutions which do not have formal recognition either by Central or State Government shall be required to produce evidence of having received government grant for conducting studies/research projects undertaken by them.

Professionals shall produce to the Customs authorities at the time of clearance evidence of their membership of the relevant professional body/association. They shall also be required to furnish a statement of imports made during the year and a declaration that the total imports do not exceed the value of Rs. 10,000/- during the licensing year; and

Books should be imported only from publishers or their accredited distributors for India and this should be certified on the invoice.

Import of educational, scientific and technical books by importers other than the eligible categories mentioned above shall not be permitted except to the extent of irrevocable letters of credit opened and established before the date of this Public Notice and for which shipments are made within a period of 90 days from the date of this Public Notice.

Awards for Distinguished Scientists

The Indian Science Congress Association (ISCA) has selected eight distinguished scientists for the 1989 awards for outstanding contribution in different branches of science.

The Hira Lal Chakravarty Award for young scientists for significant research work in botany has been awarded to Dr. Mohammad Mashkoor Alam, Aligarh Muslim University and Dr. (Mrs) Sumita Jha, Calcutta University.

The Pran Vohra Award for young scientists has been given to Dr. U.S. Sadana, Punjab Agricultural University.

The Ramanujan Award has gone to Dr. B.V. Sreekantan of the Tata Institute of Fundamental Research.

The C.V. Raman Award has been given to Prof. (Mrs) K.K. Rohtagi Mukherjee, Jadavpur University.

The K.P. Rode Memorial Lecture Award has gone to Prof. F. Ahmed, former commissioner, Geology and Mining, Government of Jammu and Kashmir.

The G.P. Chatterjee Award for outstanding original work on some aspects of science and man has been given to Prof. M.S. Swaminathan, honorary director, Centre for Research on Sustainable Agricultural and Rural Development, Madras.

The Sir Asutosh Mukherjee Gold Medal has been awarded to Prof. D.S. Kothari, former Chairman, UGC.

News from Agril. Varsities

Genetics and Plant Breeding Research

The Indian Society of Genetics and Plant Breeding, in collaboration with Banaras Hindu University, recently organised a National Seminar on Recent Advances in Genetics and Plant Breeding Research in India. The areas of discussion were from germplasm resources, breeding methods, better seeds to different aspects of plant biotechnology. There were number of invited lectures by eminent geneticists, plant breeders and the biotechnologists which provided useful base for restructuring the future research strategies. Ongoing research in distant hybridization, heteresis and breeding for better grain quality, disease and insect-post resistance were emphasised.

Inaugurating the symposium

Padmbhusan Prof. V.C. Chopra, an eminent geneticist of the IARI stressed the need of strong support to new technologies like biotechnology and developing work culture in which India assumes leadership rather than defensive and passive role. He particularly highlighted advances made in mustard improvement.

Prof. Lallan Rai, Director of the Institute of Agricultural Sciences, BHU in his presidential remarks emphasised the need of plant breeders to join hands with paste makers to develop resistant varieties.

The two-day seminar was attended by 250 eminent scientists from all over the country.

News from UGC

INSAT-1B Programme of UGC

Between 8th December to 15th December, 1989 the following schedule of telecast on higher education through INSAT 1-B under the auspices of the University Grants Commission will be observed. The programme is presented in two sets of one hour duration each every day from 12.45 p.m. to 1.45 p.m. and 4.00 p.m. to 5.00 p.m. The programme is available on the TV Network throughout the country.

1st Transmission

12.45 p.m. to 1.45 p.m.

8.12.89

"Vedic Mathematics—V"
"International Politics : India's Responses"
"A Talk with Dr. J.C. Kothari"

9.12.89

"Burns"
"Berlin—Cultural City of Europe"

10.12.89

No Telecast

11.12.89

"In a Laser Beam"
"Career Guidance : Business Management"
"The Time Has Come—I"

12.12.89

"The Basics : The Future of the Basics"
"Chemical Indicators"
"Soil Erosion : An International Concern"

13.12.89

"A Return to Nature"
"Forts of Deccan—II : Bidar"
"What are Genes ? Modern Genetics and Human Welfare —I"

14.12.89

"Introduction to Computers"
"Unravelling the Past : Chemistry Helps in Archeology"
"Teaching and Learning English"

15.12 89

"Vedic Mathematics—VI"
"Ghosts, Gods and the Human Mind"
"A Talk with Prof. W.R. Lee and Prof. Wangphanich"

2nd Transmission

4.00 p.m. to 5.00 p.m.

8.12.89

"Frequency Bands Used for Space Communications"
"Defence Mechanism—Anxiety —I"
"Acid Rain"

9.12.89

"Genesis—Paul Kee on Modern Art"
"Gottingen—Currents of the World"
"Language of the Mute"

10.12.89

No Telecast

11.12.89

"Monetary Policy in India"
"The Time Has Come—II"

12.12.89

"The Basics : Performing As a Teacher"
"Plastics and Polymers in Daily Life—II"
"New Methods of Fracture Treatment—II"

13.12.89

"Liquid Limit Test"
"Charminar : The Living Legend"
"How Does a Gene Act ? Modern Genetics and Human Welfare—III"

14.12.89

"Computer Memory—II : Sequential Access Storage"
"Automatic Line for the Production of Slabs"
"Objectives of Language Learning—II"

15.12.89

"Space Craft for Space Communication"
"Defence Mechanism—II : Conflict"
"Gawah"

We Congratulate . . . .

(1) **Dr. R.K. Hegde who has taken over as Vice-Chancellor of the University of Agricultural Sciences, Dharwad.**

(2) **Prof. S. Bhattacharya, Vice-Chancellor, Visva Bharati University, who has been elected Fellow of National Academy of Science, New Delhi.**

Computers for 688 Institutions

A total of 584 colleges in the country were provided with PC/XT computer system by the University Grants Commission upto the end of October, 1989 for the development of computer awareness among students and help in research work.

Besides, in consultation with the Electronics Commission, the UGC approved installation of medium size computers in 104 selected universities to streamline research studies, and administration. Out of these 78 universities have already installed the system.

The universities which were not selected for the installation of the computers were offered financial assistance by the Commission for buying computer time from nearby computer system operation.

In order to meet the challenge of the shortage of trained manpower in computer technology, courses like DCA (Diploma in Computer Application), MCA (Master in Computer Application), M. Tech., B. Tech. and M. Sc. have been introduced in 118 universities : DCA in 53 universities, MCA in 28 universities, B.Tech. in 8 universities, M. Tech. in 28 universities, and M.Sc. in one university.

News from Abroad

Performance-related Incentives for Spanish Teachers

Spanish university teachers are being offered big incentives to join a new system of performance-related pay. Some professors with 25 years' service, whose teaching and research pass muster can add 48 per cent bonuses to their regular pay rise.

Academics are the first civil servants to be given individual pay rises. The system is voluntary. Only those who choose to submit themselves to assessment will be eligible for consideration for bonuses.

The quality of teaching will be assessed according to standards drawn up by the Universities' Council. The candidates' previous five years of work will be considered, and any bonuses backdated to April.

Research will be assessed by a new National Commission, made up from representatives of the Ministry of Education and the Autonomous Regions, which starts work next year. The commission will be able to call in advice from national and international scientists and will look at six years' work.

Staff will be able to submit themselves for assessment up to five times in their careers. A long-serving professor earning £19,500 could see his or her salary rise to £29,000. A professor with 12 years' service could see salary boosted by almost 20 per cent to £23,500.

The system is designed to provide incentives rather than penalties. If the commission should find a candidate's research output is too low, then he or she will undergo a period of evaluation and the bonus will be reduced accordingly.

Mr. Javier Solana, the education minister, has also announced 11,000 million pesetas (£55 million) is to be spent on scholarships and funding for training research students. This is an enormous boost to the ministry's recent campaign to increase the numbers and quality of researchers and scientists. In 1982, the ministry was spending just 1,000 million pesetas on funding research training; in 1987 the figures had only risen to 3,150 million pesetas.

SPORTS NEWS

National Seminar on Physical Education & Sports Sciences

The two-day national seminar on "Recent developments in physical education and sports science in India" was recently organised by the Department of Sports Sciences, Punjabi University. Twenty four scholars presented their research papers, while 12 others illustrated their research through posters in six oral and two poster sessions, respectively. In addition, 16 experts in different disciplines of sports sciences and physical education delivered the lectures.

Dr. R.K. Sanwan of the Sports College, HAU, observed that sprinters with a high achievement motivation performed significantly better as compared to sprinters with lower achievement motivation.

Prof. A.M. Moorthy (Alagappa University) stressed the need for research in physical education and sports to develop systems through which effective health and fitness care can be made accessible to sportsmen and women and that yoga system could play an important role.

Dr. D.K. Kansal and Dr. S.K. Verma (Department of Sports Science, Punjabi University) explained the need to create a sports culture in the universities, to effectively accelerate the development of a large number of sports sciences, such as exercise physiology, sports, nutrition, human physique, sports biomechanics, sports medicine, sports psychology, sports sociology, physical culture, etc.

Dr. M.L. Kamlesh (Trivandrum) explained the role of sports psychologist in the context of the modern athleticism for building up a psychological base for sports. Prof. Rattan Singh (Professor, Biochemistry Department, PAU) illustrated the role of oxygen debt during exercise.

Speaking on the present status of physical education in the country, Mr. K.C. Gupta (HAU, Hisar) said that physical development had been relegated to a lower level priority and pure academics won over a child's requirement for creative and physical development.

AIU Library

Established in 1965, the AIU Library has acquired over the years a valuable collection of books and documents on Higher Education. Among the topics prominently represented are Educational Sociology, Educational Planning, Educational Administration, Teaching & Teachers' Training, Examinations, Economics of Education and Country Studies. Developing fields of Adult Education, Continuing Education and Distance Education, and Educational Technology are also well stocked. The Library is particularly strong in its collection of reports whether they are on the setting up of different universities or on the state of Higher Education. Files of Annual Reports of different universities are also maintained. Readers are kept informed of the latest acquisitions through our column 'Additions to AIU Library'.

The Library also receives about a 100 periodical titles on Higher Education. All these are indexed regularly and a select list appears every month as 'Current Documentation in Education'.

Doctoral Degrees awarded during the preceding month are reported as 'Theses of the Month', while registrations made for such degrees are flashed as 'Research in Progress'. Bibliographies are also compiled and supplied on demand.

Research Scholars and students of education are welcome to use these resources. The Library is open from 9.00 a.m. to 5.30 p.m. Monday through Friday. Access can also be had through inter library loan for which requisition must be made through your Librarian.

RESEARCH IN PROGRESS

A List of Research Scholars Registered for Doctoral Degrees of Indian Universities

SOCIAL SCIENCES

Sociology

1. Khanna, Sonia. *A sociological study of the people of Malana in Himachal Pradesh.* Panjab. Prof. A. Mahajan, Department of Sociology, Panjab University, Chandigarh.

2. Kimtee, Anita, *Adivasi mahilayon ka swasthya : Visheshkar Zhabua Jila kee adivasi mahilayon ke vishesh sandarbh mein.* Devi Ahilya. Dr. Ramesh Chandekar, Asstt. Prof., Department of Sociology, Indore Christian College, Indore.

3. Mehta, Kiran. *Self perception and managerial roles : A sociological study of managers in some selected business organisations.* Panjab. Prof. (Mrs.) K.P. Singh, Department of Sociology, Panjab University, Chandigarh.

4. Raghuvanshi, Prabha. *Malwa ke vikrit ank viklangon ka ek samaj shastriya adhyayan : Indore, Ujjain tatha Ratlam nagaron per adharit.* Devi Ahilya. Dr. Rajendra Jain, Assoc. Prof., Department of Sociology, P.M.B. Gujarati Arts and Law College, Indore.

5. Shrivastava, Jyoti. *Swatantr ata ke pashchat mahilayon kee samajik aur rajnitik sthiti mein parivartan : Indore Nagar ke vishesh sandarbh mein.* Devi Ahilya, Dr. D.K. Gupta, Assoc. Prof., Department of Sociology, Govt. New Girls P.G. College, Indore.

Social Anthropology

1. Misra, Karabi. *Socio-cultural consequences of technological and economic development.* Delhi. Dr. J.S. Bhandari, Department of Anthropology, University of Delhi, Delhi.

Political Science

1. Thulaseedharan, L. *Super power rivalry in the Indian Ocean.* Kerala. Dr. M. Sreenivasan, Principal (Retd.), Marathanda Mandiram, Pattathanam, Quilon.

2. Verma, Rekha, *Madhya Pradesh uchch shiksha ke vikas evam karyanvyan : Devi Ahilya Vishwavidyalaya ke vishesh sandarbh mein.* Devi Ahilya. Dr. (Smt.) S. Dube, Prof., Department of Political Science, Govt. New Girls P.G. College, Indore.

Law

1. Somanathan, K.N. *Social justice through public interest litigation : Scope and limitations.* Kerala. Dr. N.K. Jayakumar, Department of Law, University of Kerala, Trivandrum,

Education

1. Daniel, Sam V. *A study on the returns to professional education in Kerala.* Kerala. Dr. P.M. Jaleel, Reader, Department of Education, University of Kerala, Trivandrum.

2. Mehta, Kamlesh. *The differential response patterns of heartrate, blood pressure and respiration of women representing selected sports as a function of graded workload of the treadmill and cycle ergometer.* Panjab. Dr. S.N. Sharma, Department of Physical Education, Panjab University, Chandigarh.

3. Sasikala, K.R. *Accessibility and utilization of educational opportunities by scheduled caste and scheduled tribe students in professional colleges of Kerala.* Kerala. Dr. M.S. Gomathy Ammal, Prof., Department of Education, University of Kerala, Trivandrum.

Commerce

1. Shrotriya, Munendra. *Analysis of financial statement of tyre industry in India since 1984.* Agra. Dr. H.C. Malhotra, 240, Nehru Nagar, Agra.

HUMANITIES

Language & Literature

English

1. Banerjee, Susmita. *Vision and form in the shorter fiction of Katherins Anne Porter.* Devi Ahilya. Dr. R.K. Sharma, Prof., Department of English, Govt. Arts and Commerce College, Indore.
2. Pathak, Chitra N. *T.S. Eliot the exploration of the meaning and purpose of life through his poetry and plays.* Devi Ahilya. Dr. R.M. Moses, Ex-Principal and Head. Department of English, Indore Christian College, Indore.
3. Shukla, Veena. *Imagery of sight and motion in the poetry of Emily Dickinson.* Devi Ahilya. Dr. S.S. Chandal, Principal, Govt. Arts and Commerce College, Indore.

Sanskrit

1. Agnihotri, Durgashankar. *Sahstranam stotra prampra mein Vishnu Sahstranam stotra evam uski uplabdh pramukh teekayon ka sameekshatmak adhyayan.* Devi Ahilya. Dr. Bansidhar Shastri Musalgaonkar, Department of Sanskrit, Govt. Sanskrit College, Indore.
2. Guleria, Veena. *A critical study of Sanskrit dramas based on Udayankatha.* Panjab. Dr. D.R. Sharma, Department of Sanskrit, Panjab University, Chandigarh.
3. Jaya, C. *Alankarasarvasva : A study.* Kerala. Dr. N. Rama Krishna Pillai, Asstt. Editor, State Institute of Encyclopaedic Publications, Trivandrum.
4. Jayamohanakurukkal. *The conception of Sri Rama according to Balmiki and the author of Adhyatma Ramayana.* Kerala. Dr. K. Achuthan Pillai, Principal, Hindi Teachers Training College, Trivandrum.
5. Joshi, Archana. *Stotra kavyon mein Lahiri kavya dhara ka sameekshatmak parisheelan.* Devi Ahilya. Dr. Sitaram Dantre, Head, Department of Sanskrit, Govt. Arts and Commerce College, Indore.
6. Kamalkumari, R. *Sanskrit works of Godavarma Yuva Raja of Kotunnallur.* Kerala. Dr. N. Rama Krishna Pillai, Asstt. Editor, State Institute of Encyclopeadic Publications, Trivandrum.
7. Karam Chand. *Vishnusahatranamni Shankar Ramanuj : Bhashyostulnatmak vimarsh.* Panjab. Dr. Anirudh Joshi, Department of Sanskrit, Panjab University, Chandigarh.
8. Musalgaonkar, Nalini. *Saundarya Lahiri : Ek tattwik vivechan : stotra sahitya darshan evam agamon ke sandarbh mein.* Devi Ahilya. Dr. L.N. Shukla, Govt. Sanskrit College, Ram Bagh Chaurah, Indore.
9. Rema Devi Amm, K. *Pancapadik of Padmapada : A study.* Kerala. Dr. N. Rama Krishna Pillai, Asstt. Editor, State Institute of Encyclopaedic Publications, Trivandrum.
10. Sharma, Madhura Dass. *Bal Ramayan : Ek kavya shastriya anusheelan.* Panjab. Dr. Dharmanand Sharma, Vishveshvaranand Vishwa Bandhu Institute of Sanskrit and Indological Studies, Post Office Sadhu Ashram, Hoshiarpur.
11. Sharma, Prem Chand. *Shishupalvadh mahakavya ka dhvani sidhant kee drishti se adhyayan.* Panjab. Dr. Jai Narain Sharma, Vishveshvaranand Vishwa Bandhu Institute of Sanskrit and Indological Studies, Post Office Sadhu Ashram, Hoshiarpur.

Punjabi

1. Blawinder Kaur. *Kesar Singh de navalan da alochanatmik adhyayan.* Panjab. Dr. Jagtar Singh, Govt. College, Hoshiarpur.
2. Harminder Paul. *Panjabi novel 1960-85 vich mahanagari chetna.* Panjab. Dr. Jagtar Singh, Govt. College, Hoshiarpur.
3. Jessy, Kanwal Jeet Singh. *Punjabi novel vich anchlikta.* Panjab. Dr. Om Prakash Vashishta, School of Punjabi Studies, Panjab University, Chandigarh.
4. Sawraj Kaur. *Kartar Singh Duggal de novelan da shilp vidhan.* Panjab. Dr. H.S. Sachar, School of Punjabi Studies, Panjab University, Chandigarh.
5. Surinder Pal Singh. *A study of historical reference in varan by Bhai Gurdass.* Panjab. Prof. Raghbir Singh, School of Panjabi Studies, Panjab University, Chandigarh.
6. Swaran Singh. *Punjabi Kahani vich nimn varg da chitran.* Panjab. Dr. Kessar Singh Kesar, School of Panjabi Studies, Panjab University, Chandigarh.

Hindi

1. Dube, Vidyavati. *Dr. Ramkumar Verma ka vaicharik paksh. D.Litt.* Devi Ahilya.
2. Georgina, Molly. *A comparative study of the poems of Suryakant Tripathi Nirala and Kumaran Asan.* Kerala. Dr. M.A. Karim, Publication Officer, Department of Publication, University of Kerala, Trivandrum.
3. Grover, Asha. *Krishna Sobti ka katha sahitya pratikon ke sandarbh mein.* Panjab. Dr Paresh, Department of Hindi, Panjab University, Chandigarh.
4. Harbans Lal. *Aathaven dashak ke Hindi upanyason mein abhivyakt swar.* Panjab. Dr. Jai Prakash, Department of Hindi, Panjab University, Chandigarh.
5. Harminder Kaur. *Lakshminarayanlal ke natak sahitya ka adhyayan : Adhunik bodh ke sandarbh mein.* Panjab. Dr. Shakuntla Yadav, Lecturer, S.C. D. Govt. College, Ludhiana.
6. Janaki, P. *The influence of Maithili Saran Guptaji's poems on the contemporary Indian society.* Kerala Dr. M.A. Karim, Publication Officer, Department of Publications, University of Kerala, Trivandrum.
7. Janardhanan Nair, S. *A study of the thematic and theatrical development of Hindi dramas since 1960, with special reference to Mohan Rakesh and Lakshmi Narayanlal.* Kerala. Dr. K. Padmavathy, Prof., Department of Hindi, University College, Trivandrum.
8. Kamlesh Kumari. *Premchandottar Hindi kahani, 1936 se 1960 : Andunikta bodh evem nagar bodh ka sankraman.* Panjab. Prof. M.P. Bhardwaj, Department of Hindi, Panjab University, Chandigarh.
9. Leelakumari Amma, S. *A critical study of the essays of Vidya Nivas Misra.* Kerala. Dr. S. Thankamoni Amma, Reader, Institute of Correspondence Courses, University of Kerala, Kariavattom.
10. Mahalkary, Umesh Kumar. *Renu ke upanyason ka shaili vaigyanik anusheelan.* Devi Ahilya. Dr. Dilip Kumar

Chouhan, Lecturer, Department of Hindi, Govt. Arts and Commerce College, Indore.

11. Radhika Devi, D. *Depiction of family life in Hindi Malayalam novels of post sixty period.* Kerala. Dr. V.P. Mohammed Kunju Metharu, Reader, Department of Hindi, Institute of Correspondence Courses, University of Kerala, Kariavattom.

12. Ranadive, V.N. *Madhyayugeen nari santon kee vani ka anusheelan : Sahajobai Dyabai and Meerabai.* Shivaji. Dr. V.K. More, Raj Chh. Shahu College, Kolhapur.

13. Savita Kumari. *Hazari Prasad Dwivedi ke nibandh sahitya mein manav mulya.* Panjab. Prof. D.P. Maini, Department of Hindi, Panjab University, Chandigarh.

14. Sharika, V.R. *A comparative study of the impact of freedom movement on Hindi and Malayalam poetry.* Kerala. Dr. S. Thankamoni, Reader, Institute of Correspondence Courses, University of Kerala, Kariavattom.

15. Sharma, Ahinsa. *Manavvad ke sandarbh mein Hazari Prasad Dwivedi ka upanyas sahitya.* Panjab. Dr. Yash Gulati, Department of Hindi, Panjab University, Chandigarh.

16. Sreela, B.H. *A study of short stories in Hindi by women writers in the post independence period with emphasis on treatment of social problems.* Kerala. Dr. N.E. Viswanatha Iyer, Prof. (Retd.), Anusham, 26/2035, Tutor's Lane, Trivandrum.

17. Triapthi, Bhakti. *Sur and Tulsi ke nari patra.* Devi Ahilya. Dr. S.S. Vyas, Prof. (Retd.). Department of Hindi, Devi Ahilya Vishwavidyalaya, Indore.

18. Vincent, Bernaditte. *Comparative study of the peasent life on the short stories of Premchand and Thakazhi.* Kerala. Dr. M.A. Karim, Publication Officer, Department of Publications, University of Kerala, Trivandrum.

19. Vyas, Yeshwant. *Swatantrayottar Hindi gadya mein vyang.* Devi Ahilya. Prof. G.D. Tripathi, Head, Department of Hindi, Govt. Arts and Commerce College, Indore.

Urdu

1. Ghulam Mustafa. *Hafiz Jalandhari kee shairi ka tangidi mutalea.* Panjab. Dr. Haroon Ayub, Department of Urdu, Panjab University, Chandigarh.

2. Inamdar, M.M. *A study of the progress of Urdu language and literature in District Bijapur after independence.* Shivaji. Dr. M.N. Wadman, Solapur Social Associations' Arts and Commerce College, Solapur.

3. Narang, Mohinder Pratap Singh. *Qais Jalandhari : Shakshsiyat aur fun.* Panjab. Dr. Haroon Ayub, Department of Urdu, Panjab University, Chandigarh.

Marathi

1. Joshi, Smita. *Shri Vi Va Sirvadkar ani Vasant Kanetkar Yanchya natkancha tulnatmak adhyayan.* Devi Ahilya. Dr. Leela More, Asstt. Prof., Govt. Arts and Commerce College, Indore.

Malayalam

1. Anandan, N.N. *Influence of Malayalam on Konkani literature.* Kerala. Dr. K. Retnamma, Deputy Director (Retd.), Collegiate Education, Nandanam Pettah, Trivandrum

2. Anitha, C.R. *Malayalathile Vyshnavsthothra : Krithikal oru padanam.* Kerala. Dr. K. Ramachandran Nair, Prof. and Head, Department of Malayalam, University of Kerala, Kariavattom.

3. Subhakumari, V. *Budhadarshna thinte prabhavam ashan kavithayil.* Kerala. Dr. D. Benjamin, Reader, Department of Malayalam, University of Kerala, Kariavattom.

4. Sushma, L. *Thakazshiyude cherukathasahityam-oru padanam.* Kerala. Dr. D. Benjamin, Reader, Department of Malayalam, University of Kerala, Kariavattom.

5. Thomas, Raju. *Adhunikathayude pachathalathil K. Ayyappa Panikerude kavitha-oru padanam.* Kerala. Dr. D. Benjamin, Reader, Department of Malayalam, University of Kerala, Kariavattom.

Geography

1. Chandravanshi, Santosh Kumar. *Determinents of agricultural productivity in the Chattisgarh Basin, Madhya Pradesh.* HS Gour. Dr. S.K. Sharma, Reader, Department of Geograpy, Dr. Harisingh Gour Vishwavidyalaya, Sagar.

2. Kaushal, Rajeev. *Population growth and family welfare programmes in the Seoni Plateau.* HS Gour. Dr. R.P. Sharma, Lecturer, Department of Geography, Dr. Harisingh Gour Vishwavidyalaya, Sagar.

3. Khare, Neelu. *Geographical patterns of the urban pollution : Case studies in cities of Madhya Pradesh.* HS Gour, Dr. D.S. Shrivastav, Reader, Department of Geography, Dr. Harisingh Gour Vishwavidyalaya, Sagar.

4. Mishra, Ramakant. *Industrialisation and environmental degeneration : A case study of the Maihar-Jabalpur Region of Madhya Pradesh.* HS Gour. Dr. S.K. Shukla, Reader, Department of Geography, Dr. Harisingh Gour Vishwavidyalaya, Sagar.

5. Rohitas, Pannalal. *Urban development policies and quality of life in the Malwa Region of Madhya Pradesh.* HS Gour, Prof. V.C. Mishra, Department of Geography, Dr. Harisingh Gour Vishwavidyalaya, Sagar.

6. Sadhna. *Population food and nutrition in Sagar Divison.* HS Gour. Dr. R.P. Mishra, Lecturer, Department of Geography, Dr. Harisingh Gour Vishwavidyalaya. Sagar.

7. Sahu, Ajay Kumar. *Nutritional profile and health status of tribal children in the Western Satpura Range in Madhya Pradesh.* HS Gour. Dr. P. D. Tiwari, Lecturer, Department of Geography, Dr. Harisingh Gour Vishwavidyalaya, Sagar.

8. Shrivastav, Pradeep Kumar. *Food Consumption and nutritional problems of rural population in the Kanhan and Pench Basin areas, Madhya Pradesh.* HS Gour. Dr. P.D. Tiwari, Lecturer, Department of Geography, Dr. Harisingh Gour Vishwavidyalaya, Sagar.

9. Singh, Shiva Kant. *Rural development policies and programmes in the Sagar District of Madhya Pradesh : A geographical appraisal.* HS Gour. Dr. S.K. Shukla, Reader, Department of Geography, Dr. Harisingh Gour Vishwavidyalaya, Sagar.

10. Tiwari, Akhilesh Kumar. *A study of protein energy, malnutrition and deficiency diseases among tribal children in the Eastern Satpura Range, Madhya Pradesh.* HS Gour. Dr. P.D. Tiwari, Lecturer, Department of Geography, Dr. Harisingh Gour Vishwavidyalaya, Sagar.

11. Tiwari, Neerja. *Resource development and environmental degradation in the Eastern Satpura Region, Madhya Pradesh.* HS Gour. Prof. R,S. Dubey, Reader, Department of Geography, Dr. Harisingh Gour Vishwavidyalaya, Sagar.

History

1. Pandey, Sudha. *Changing status of muslim women in mediaeval India upto 1761.* Panjab. Prof. R.C. Jauhri, Department of History, Panjab University, Chandigarh.

THESES OF THE MONTH

A list of Doctoral Theses Accepted by Indian Universities.

SOCIAL SCIENCES

Psychology

1. Gupta, Sangita. *A study of some psychological correlates of depression.* Kurukshetra.

2. Koopai, Mohammad Safari. *Lexis of mentally retarded : A psycholinguistic study of Persian speaking mentally retarded children.* Kurukshetra.

3. Leena Varkey, P. *A study of personality, stress and coping in individuals with coronary heart disease.* Bangalore. Dr. G.G. Prabhu, Department of Clinical Psychology, National Institute of Mental Health and Neuro Sciences, Bangalore.

Sociology

1. Awasthi, Uma Kant. *A comparative sociological analysis of three refugee communities in India viz; Tibetans, Panjabis and Bengalis.* JNU. Dr. M.N. Panini, Assoc Prof., Centre for the Study of Social Systems, Jawaharlal Nehru University, New Delhi.

2. Ghosh, Biswajit. *Organising unorganised workers : A sociological study of trade unionism in the leather and book binding industries in Calcutta.* JNU. Dr. M.N. Panini, Assoc. Prof., Centre for the Study of Social Systems, Jawaharlal Nehru University, New Delhi.

3. Gupta, Amit Kumar. *Political mobilization, social structure and change : A study of peasant uprising in Kakdwip.* JNU. Prof. T.K. Oommen, Centre for the Study of Social Systems, Jawaharlal Nehru University, New Delhi.

4. Gurchain Singh. *The changing social structure and the new middle class in India : A socio-historical perspective.* JNU. Prof. K.L. Sharma, Centre for the Study of Social Systems, Jawaharlal Nehru University, New Delhi.

5. Imchan, C. Limawati. *A comparative typology of Naga socio-political systems.* JNU. Yogendra Singh, Centre for the Study of Social Systems, Jawaharlal Nehru University, New Delhi.

6. Jassal, Smita Tewari. *Agrarian structure : A study of the Faizabad District.* Delhi.

7. Mohd Talib. *Some social aspects of class-formation among the migrant labour : A case study of labour settlement in Delhi.* Jamia. Dr. B.N. Nanda, Reader, Department of Sociology, Jamia Millia Islamia, New Delhi and Prof. R.K. Jain, Centre for the Study of Social Systems, Jawaharlal Nehru University, New Delhi.

8. Palwinder Singh. *Changing pattern of energy use in Punjab villages : A sociological exploration.* Punjabi.

9. Siva Ram, P. *Occupational mobility among backward castes in Proddatur Town of Cuddapah District, Andhra Pradesh, South India.* Venkateswara. Dr. S. Bhaskar, Department of Sociology, Sri Venkateswara University College, Tirupati

Social Anthropology

1. Ningaiah, N. *The socio-cultural change in the status of Ex-untouchable castes in Mysore.* Karnatak. Dr. (Mrs.) P.V. Mahale, Reader, Department of Anthropology, Karnatak University, Dharwad.

Political Science

1. Das, Radha Mohan. *The movement for the amalgamation of Oriya speaking tracts : A study of the political contribution of Madhu Sudan Das.* Berhampur. Dr. P.S.M. Patre, Principal, Adivasi College, Balliguada.

2. Dass, Pushpa Rani. *White papers as instruments of communication and accountability : A case study of the Government of India White Papers on Domestic Issues, 1947-1984.* Delhi.

3. Ram Pal Singh. *A critical study of Indo-Srilankan relations in the light of the Tamils demand for a separate state in Srilanka.* Kurukshetra.

4. Sharma, Arjun. *Caste, class and politics in rural India : A comparative study of two village panchayats, Bihar and West* Bengal. JNU. Dr. Sudha Pai, Centre for Political Studies, Jawaharlal Nehru University, New Delhi.

5. Yog Raj. *National integration—Sikh community : A case study.* Jammu. Dr. Balbir Singh, Prof. and Dr. Vidya Bhushan, Reader, Department of Political Science, University of Jammu, Jammu.

Economics

1. Anthuvan, M. Victor Louis. *An inquiry into the structure and performance of informal sector in Tiruchirapalli urban agglomoration.* Bharathidasan.

2. Atkare, Prakash. *Nature and role of risk and uncertainty in paddy wheat based farming system of Madhya Pradesh.* Durgawati. Dr. B.L. Mishra, Senior Scientist, Zonal Agricultural Research Station, Powarkheda, Distt. Hoshangabad.

3. Atreja, Usha Rani. *Efficiency and productivity of capital in public cooperative sector dairy plants.* Kurukshetra.

4. Brij Mohan. *Deficit budgeting and its impact on Indian economy.* Kurukshetra.

5. Gupta, Jayant Kumar. *Regional disparities and trend in area, production and productivity of major crops in Madhya Pradesh.* Durgawati. Prof. D.P. Kesharwani, Kesharwani College, Jabalpur and Dr. P.K. Awasthi, Asstt. Prof., Jawaharlal Nehru Krishi Vishwavidyalaya, Jabalpur.

6. Munshi, Mahmudmiyan Abdullamiyan. *A study to develop and standardize, a teaching effectiveness scale and its application.* Marathwada Agrl. Dr. G G. Nandapurkar, Prof., Department of Agricultural Extension, College of Agriculture, Marathwada Agricultural University, Parbhani.

7. Taneja, Suresh Kumar. *Saving and investment behaviour of rural households in Punjab.* Kurukshetra.

8. Vandana, J. *Technological change and its impact on productivity in public undertaking : A case study of Bhilai Steel Plant, 1956-86.* Durgawati. Dr. Manohar Pandit, Department of Economics, Rani Durgawati Vishwavidyalaya, Jabalpur.

9. Venkata Reddy, Kata. *Production function studies in Indian agriculture : An appraisal.* Andhra.

Law

1. Bhajan Kaur. *The problem of polygamy and its changing perspective under the personal laws of India : A sociological study.* Punjab.

2. Dubey, Krishna Kumar. *A critical study of sales tax legislations in Madhya Pradesh.* Durgawati. Dr. M.P. Swarnkar, Department of Law, Rani Durgawati Vishwavidyalaya, Jabalpur.

Education

1. Chopra, Rita. *Developing learning packages for illiterate adults and testing their effectiveness : An experimental study.* Kurukshetra.

2. Ganguly, Malabika. *A study of the determinants of scholastic achievement in rural and urban areas.* Visva-Bharati.

3. Garg, Kanta Prasad. *A factorial study of reasoning abilities at the age of 14+.* Jamia. Prof. Devendra Joshi, Dean, Department of Education, Jamia Millia Islamia, New Delhi.

4. Gupta, Rita. *A study of development of geographical concepts among children of different age groups and construction of improved geographical teaching material.* Kurukshetra.

Commerce

1. Dube, Manoj Kumar. *The role and impact of Madhya Pradesh Financial Corporation in industrial development of Dewas.* Devi Ahilya.

2. Krishna Reddy, B. *Financial management in cotton textile mills in Andhra Pradesh.* Venkateswara. Dr. K. Seshaiah Department of Commerce, Sri Venkateswara University College, Tirupati.

3. Rama Rao, Bokka. *Agricultural commodity transportation in India : A study of Jaggery flows at Anakapalle regulated market.* Andhra.

4. Sharma, Sadhana. *An empirical study of organisational role stress as a function of personality organisational climate and certain demographic variables.* HP.

Management

1. Gupta, Arvind Kumar. *Role of financial institutions in the industrial growth of Rajasthan.* Kurukshetra.

2. Kartar Singh. *Commodity taxes in Haryana : A study in administrative efficiency.* Kurukshetra.

3. Raja Gopala Rao, Akula. *Recruitment and selection in engineering personnel in selected public and private sector undertakings in Andhra Pradesh.* Andhra.

4. Ramaprasada Rao, Chintapalli. *Human factor in municipalities : A study of personnel working in selected municipalities of Coastal Andhra.* Andhra

5. Saini, Dalu Ram. *Behavioural pattern of rural and urban consumers : A study of selected areas in Rajasthan.* Rajasthan. Dr. P.K. Srivastava, Department of Business Administration, University of Rajasthan, Jaipur.

6. Sharma, Madan Mohan. *A study of financial management practices of universities in India.* Punjabi.

7. Venkatarama Lakshmi Narsimha Rao, Gottipulla Buchi. *Participative management : A case study of Visakhapatnam Port Trust.* Andhra.

RABINDRA BHARATI UNIVERSITY

56A, B.T. ROAD,
CALCUTTA-50

NOTICE

Applications are invited for the post of Readership in Vedic Studies in the department of Sanskrit.

Qualification and Experience

Consistently good academic record with a doctoral degree or equivalent published work. Evidence of being actively engaged in (i) research, or (ii) innovation in teaching materials. Specialization in Indian Linguistics and Panini Grammar. At least five years' experience of teaching and/or research provided that at least three of these years were as Lecturer (in the UGC scale) or in an equivalent position. This condition may be relaxed in the case of candidates with outstanding record of teaching/research.

Candidates with less than 55% marks in M.A. (Sanskrit) will not ordinarily be considered.

Last date of receiving application : 15th December, 1989.

R.C. Mitra
REGISTRAR

RABINDRA BHARATI UNIVERSITY

56A, B.T. ROAD,
CALCUTTA-50

NOTICE

Applications are invited ia the prescribed forms for the undernoted UGC Junior Research Fellowships. Only NET qualified candidates should apply in the respective subjects : (No Postal Order is necessary).

Sanskrit, Economics, Political Science, History, Philosophy, English, Drama, Dance, Rabindra Sangeet and Visual Arts.

Those who applied in response to the advertisement dated 3 April, 1989 need not apply again.

Applications must reach the undersigned on or before 28th February, 1990.

R.C. Mitra
REGISTRAR

INDIAN COUNCIL OF MEDICAL RESEARCH

The Council proposes to fill up the following posts in the Hqs. Office of the Council, New Delhi :

(1) Senior Research Officer (Medical) (one post) Rs. 3000-100-3500-125-4500 + usual allowances.

Qualifications and Experience

Essential : (i) MBBS from a recognised university with atleast 6 years research experience on clinical/ experimental evaluation of Medicinal plants/traditional remedies in a reputed teaching/research organisation: **OR (ii)** Doctorate or equivalent postgraduate degree in a bio-medical subject (like Medicine, Paediatrics, Pharmacology, Pathology and related disciplines with two years research experience preferably in clinical and experimental evaluation of medicinal plants/traditional remedies. Those who do not possess the minimum basic qualification in modern medicine (i.e. MBBS) and those who had already applied for the post in response to earlier advertisements need not apply.

Desirable : A doctorate or equivalent postgraduate medical qualification.

(2) Senior Research Officer (Ophthalmology) (one post) Rs. 3000-100-3500-125-4500 + usual allowances:

Qualifications and Experience

Essential : MBBS from a recognised university with 6 years research/teaching experience in Ophthalmology/Preventive and Social Medicine in a reputed teaching/research organisation.

Desirable : A doctorate or equivalent postgraduate degree in Ophthalmology. Two years experience in community ophthalmology/epidemiological studies related to ophthalmology.

(3) Research Officer (Statistics) (One post reserved for SC) Rs. 2200-75-2800-EB-100-4000 + usual allowances.

Qualifications and Experience

Essential : 1st Class M.Sc., in Statistics or Mathematics.

Desirable : Three years experience of working on interactive computer systems using Data base packages. Training in programming in FORTRAN/BASIC & COBOL from a recognised institution.

(4) Research Officer (Programming) (2 posts) - (One each reserved for SC & ST) Rs. 2200-75-2800-EB-100-4000 + usual allowances.

Qualifications and Experience

Essential : 1st Class M.Sc. in Statistics or Mathematics with Training in programming in FORTRAN/ BASIC language from recognised institution.

Desirable : Three years experience in Computer Programming in solving scientific problems relating to bio-medical research, Familiarity with survey data processing using standard packages for statistical analysis viz. SAS, SSP, IMSL etc. Operational experience of working on inter-active computer systems, micro processor based system or time sharing system involving the application of DBMS.

(5) Research Officer (Basic Reproductive Biology) (2 posts) (Reserved for SC) Rs. 2200-75-2800-EB-100-4000 + usual allowances.

Qualifications & Experience

Essential : 1st Class M.Sc., in life sciences preferably (Zoology or Biochemistry) from a recognised university.

Desirable : 3 years research experience in the field of reproductive biology. A doctorate or equivalent postgraduate qualifications.

(6) Programmer : (One post) Rs. 2000-60-2300-EB-75-3200-100-3500 + usual allowances

Qualifications & Experience

Essential : B.Sc., in Statistics or allied subjects with Diploma/Certificate in Computer Programming from recognised institution or M.Sc. in Computer Sciences.

Experience	
B.Sc., 5 years M.Sc., 2 years	in Computer Programming (using FORTRAN, COBOL and BASIC languages) and use of PCs for data analysis.

(7) Technical Officer (One post) Rs. 2000-60-2300-EB-75-3200 + usual allowances.

Qualifications & Experience : (i) A Master's degree in biomedical science (Zoology, Pharmacy. Pharmacology, Biochemistry, Life Sciences, etc.) with atleast 3 years research experience, (ii) Experience in copy cditing, proof reading and other aspects of production in a reputed publishing house. Knowledge of printing, layout etc. relating to Offset press.

(8) Senior Documentation Assistant : (One post reserved for SC) Rs. 1640-60-2600-EB-75-2900 + usual allowances

Qualifications and Experience

Essential : (i) Master's degree in a science subject with Bachelor's Degree in Library Science from a recognised University. (ii) Experience as Librarian/ Documentation Assistant in a Scientific organisation for atleast 3 years.

Desirable : Knowledge/experience in data collection/bibliographic work/preparation of index, relating to biomedical topics including medicinal plants.

(9) Console Operator (One post) (Reserved for SC) Rs. 1640-60-2600-EB-75-2900 + usual allowances.

Qualifications and Experience

(i) Master's degree in Mathematics or Statistics. (ii) Two years experience in operations of interactive computer system with multi-terminal real time environment using magnetic tapes and disc drive. (iii) Knowledge of computer programming in FORTRAN/COBOL/BASIC. (iv) Working experience on HP-3000 Computer system.

(10) Technical Assistants : (Two posts) (Reserved one each for SC/ST) Rs. 1400-40-1800-EB-50-2300 + usual allowancss

Qualifications and Experience

Essential : Master's degree in Life Sciences.

Desirable : Experience in carrying out and/or providing technical and administrative support for scientific activities, preferably in biomedical research.

(11) Management Information Operator (Two posts) Rs. 1200-30-1560-EB-40-2040 + usual allowances.

Qualifications and Experience

Essential Qualification : (i) A Bachelor Degree with Statistics/Mathematics. (ii) Experience : One year experience in coding and compilation of data pertaining to Health and Family Welfare Planning or one year experience of on-line data entry for Bio-Medical Management Information System on HP Computers.

(12) Copy Holder-cum-Typist (LDC) (One post) (Reserved for SC) Rs. 950-20-1150-EB-25-1500 + usual allowances

Qualification and Experience

(i) Graduate (preferably in Science) with atleast 2 years experience in proof reading of technical matter in a reputed publishing house. (ii) Experience in English typing at a minimum speed of 40 w.p.m.

Desirable : Experience in proof reading of bio-medical publications.

Age : For posts No. 1 to 5 below 45 years and for posts No. 6 to 7 below 35 years and for posts No. 8 to 12 below 30 years. Relaxable upto 5 years for SC/ST candidates.

Conditions : Candidates called for interview will be paid 2nd class return fare on production of documents. Non-practicing allowances is admissible to Medical Graduates only as per rules of the Council. Private practice is not allowed. Service under the Council is pensionable. The period of experience prescribed is relaxable at the discretion of the competent authority.

Applications from employees working in Govt. Departments, Public Sector Organisations and Govt. funded research agencies should be forwarded through proper channel.

For Post No. 10 to 12 : Application on plain paper giving full particulars should be sent to the Director General, Indian Council of Medical Research, Ansari Nagar, New Delhi, alongwith two copies of the latest passport size photograph and an attested copy of certificates/testimonials including Caste Certificate for reserved posts.

For Post No. 1 to 9 : Application forms and other details can be obtained from the Office of the Director General, Indian Council of Medical Research, Ansari Nagar, New Delhi-110 029 on or before 21st Dec. 1989.

Forms duly completed should be sent to the Director General, Indian Council of Medical Research, Ansari Nagar, New Delhi-110 029 alongwith a crossed Indian Postal Order for Rs. 8/- payable to DG, ICMR, New Delhi.

SC/ST candidates are exempted from this payment. Incomplete and late applications will not be entertained. Applications duly completed should reach the ICMR Office **on or before 29th December, 1989.**

ANDHRA PRADESH OPEN UNIVERSITY

HYDERABAD

ELIGIBILITY TEST FOR ADMISSION TO THE B.A./B.Com COURSES (1990-91)

* ELIGIBILITY CRITERIA : Candidates with or without any educational qualifications are eligible to appear at **Eligibility Test** for Admission into B.A/B. Com (3 year Degree Courses) provided they complete **21 years of age by Ist July, 1990.**

* DATE VENUE AND MEDIA OF ELIGIBILITY TEST : The Test will be conducted on the **18th March, 1990.** (Sunday) in English and Telugu media at all the study centres of Andhra Pradesh Open University which are located in the Twin Cities of Hyderabad & Secunderabad and in all the Districts of Andhra Pradesh.

* HOW TO OBTAIN THE APPLICATION FORM :

(a) **By Post** : You can obtain the Application Form and Prospectus by Registered Post from the Office of the Controller of Examinations, A.P. Open University, 8-3-952/10/2/1, Srinagar Colony Road, Panjagutta, Hyderabad-16 by sending a crossed Demand Draft/Postal Order for Rs. 15/- drawn in favour of the "Registrar, A.P. Open University", alongwith the requisition letter.

(b) **In Person** : You can also obtain the Application Form & Prospectus in person by submitting a crossed Demand Draft/Indian Postal Order for Rs. 5/- drawn in favour of "Registrar, A.P. Open University" payable at Hyderabad from the Office of the Controller of Examinations at the address mentioned above OR from the Office of the Co-ordinator of APOU study centres which are located in all districts of Andhra Pradesh.

* **Commencement of Sale of Application Forms**	:	**27-11-1989**
* **Last Date for Sale of the Applications Forms**	:	**27-12-1989**
* **Last Date for Submission for Filled-in Application Forms**	:	**03-01-1990**

* HOW TO APPLY : You have to fill in the Application form and submit it to the Controller of Examinations, A.P. Open University, 8-3-952/10/2/1, Srinagar Colony Road, Panjagutta, Hyderabad-16 in person or may be sent by Registered Post so as to reach him on or before **3rd January, 1990.**

* NOTE : 1. DDs/IPOs obtained prior to notification dated (27th Nov, 1989) are **not** accepted. Money Order/Cheque/Cash Payment will also be **not** accepted.

2. DIRECT ADMISSION TO B.A./B.Com/B.Sc. DEGREE COURSES : Candidates who have passed the Intermediate Examination conducted by the Board of Intermediate or any examination equivalent thereto are eligible for Direct Admission to the degree courses are not required to appear at the Eligibility Test. A separate notification will be issued for such candidates sometime in the month of April/May, 1990.

REGISTRAR

NATIONAL INSTITUE OF HYDROLOGY

JALVIGYAN BHAWAN, ROORKEE

No. 5/89-NIH (ADMN) **Dated : 22-11-89**

Applications are invited for the following posts n National Institute of Hydrology (A Government of ndia Society) Roorkee from Indian Nationals satisfying qualifications and experiences laid down therefor. The posts reserved for scheduled caste and scheduled tribe are indicated against each post.

1. SCIENTIST E : One post. Post reserved for scheduled caste in any of the following areas : Surface Water Hydrology/Conjunctive use.

Age : Below 45 years.

Scale of Pay : Rs. 3700-125-4700-150-5000 total emoluments at the initial of the scale is Rs. 4,890, excluding H.R.A/C.C.A

Qualifications : Essential : 1. ME/M.Tech. in Water Resources/Hydraulics/Irrigation/Hydrology with 60% or 7.0/10.0 CGPA in both BE/B.Tech. and ME/M.Tech. Examinations. 2. At least 10 years experience in teaching/research design/investigation and planning of which at least 5 years experience must be at the scientist-C or equivalent level (Pay-scale of Rs. 3000-4500) with proven ability of conducting and guiding research and with experience in handling applied research problems.

Time spent on Ph.D. shall be considered as experience upto a maximum of 3 years.

Desirable : 1. Ph.D. in Engineering for Engineering postgraduate and post doctoral work for Ph.D. in Science. 2. Publications in reputed national & international journals 3. Corporate membership of professional, scientific and engineering associations/ societies.

2. SCIENTIST - C : One post. Post reserved for scheduled caste Candidate in the area of Surface Water Hydrology/Conjunctive use.

Scale of Pay : Rs. 3000-100-3500-125-4500. Total emoluments at the initial of the scale is Rs. 4020/- excluding HRA/CCA

Age : Below 40 years.

Qualifications : Essential : 1. ME/M.Tech. in Water Resources/Hydraulics/Irrigation/Hydrology/ Soil and Water with 60% or 7.0/10.0 CGPA in both BE/B. Tech. and ME/M. Tech. examinations. 2. At least 5 years experience in teaching/research design/ investigation/planning in the relevent field at the level of Scientist-B, pay scale of Rs. 2200-4000, or equivalent with proven ability of conducting independent study/research. Time spent on Ph.D. shall be considered as experience upto a maximum of 3 years.

Desirable : 1. Ph.D. in Engineering for Engineering postgraduate and post doctoral work for Ph.D. in science. 2. Publications in reputed national & international Journals.

3. SCIENTIST - B : 4 posts : 2 posts reserved for scheduled caste candidates and 2 posts reserved for scheduled tribe candidates.

Area : 3 posts in the area of Surface Water Hydrology/Conjunctive use and 1 post in the area of Ground Water Hydrology.

Scale of Pay : Rs. 2200-75-2800-EB-100-4000. Total emoluments at the initial of the scale is Rs. 2970/- excluding HRA/CCA.

Age : Preferably below 35 years.

Qualifications : Essential : (a) Surface Water Hydrology/Conjunctive use. ME/M. Tech. in Water Resources/Hydraulics/Irrigation/Hydrology/Soil and Water with 60% or 7.0/10.0 CGPA in both BE/B. Tech. and ME/M. Tech. examinations. **(b)** Ground Water Hydrology : ME/M. Tech. in Water Resource Hydraulics/Irrigation/Hydrology/Soil and Water with 60% or 7.0/10.0 CGPA in or both BE/B. Tech. and ME/M. Tech. examinations **OR** Ph.D. degree in Geology with specialisation in Geohydrology/ Hydrology/Water quality with 60% or 7.0/10.0 CGPA in M.Sc. examinations.

Note 1. These are the revised qualifications for the post of scientist—"B" & scientist "C". The candidates who had applied earlier in response to the advertisement no. 1/89-NIH (ADMN) dated 16-1-89 for general category would be considered as per these recruitment rules and called for interview. **Note-2** The qualifications regarding experience is relaxable at the discretion of competent authority in the case of candidates belonging to SC/ST, if at any stage of selection the competent authority is of the opinion that sufficient number of candidates from these communities possessing the requisite qualifications are not likely to be available to fill up the vacancies reserved for them. **Note-3.** Selected persons can be appointed on deputation basis also. The above mentioned posts carry usual allowances as admissible under the Central Government Rules. Age will be relaxable for persons already in service in the Institute and other Government/Semi Govt./Autonomous Organisations retrenched employees or Defence services and physically handicapped persons, as per rules of the Government of India.

Age will be determined as on 10-1-1990.

Persons already employed in Govt./Semi Govt./ Autonomous Bodies should apply through proper channel. Applications not forwarded through proper channel may not be considered.

Application forms may be obtained by **December 20, 1989** from Administrative Officer, National Institute of Hydrology, Jalvigyan Bhawan, Roorkee (UP)-247 667 by sending a self-addressed envelope of the size 12 x 28 cms. Application forms duly completed in duplicate with copies of all testimonials should reach the Administrative Officer, National Institute of Hydrology, Jalvigyan Bhawan, Roorkee-247 667 (UP) **on or before 10th. January, 1990.** Job Location: Anywhere in India.

UNIVERSITY OF KALYANI

KALYANI, NADIA-741 235

Advt. No. 4/89 Dated : 22-11-89

Applications in prescribed form are invited for the post on the scale mentioned below with allowances as admissible under the University rules.

Department of Statistics : Lecturer in Statistics : One Post (permanent)

(a) Good academic record with Master's degree in Statistics at least 55% marks or its equivalent grade following an Honours degree in the relevant subject.

(b) Specialization : Inference.

Desirable

(c) At least two years' experience of teaching at the post-graduate or Honours level or of research.

Scale of Pay : Rs. 2200-75-2800-100-4000. Age : Preferably below 40 years.

Pay will be fixed as per rules of the University.

Application must be submitted in the prescribed form which may be obtained from the office of the undersigned from 1st December to 21 December, 1989 on full working days (No form will be issued on Saturdays) personally or by sending self-addressed stamps (Rs. 1-80) envelope (25 cm x 12 cm) on payment of Rs. 7.50 (charge one-fourth for Scheduled Castes and Scheduled Tribes candidates) by Current crossed Indian Postal Order in favour of the 'University of Kalyani'. Persons already in employment should apply through proper channel. Applications should be submitted in an envelope superscribed with the name of the post applied for alongwith attested copies of certificates and marks-sheets in respect of all examinations and reprints of research publications, books etc. and the same must reach the office of the undersigned on or before 21st December, 1989.

The Scheduled Castes and Scheduled Tribes candidates must produce the documents of caste from the appropriate authority (S.D.O.) at the time of collecting forms.

No T.A. is admissible for attending of interview.

REGISTRAR

RAJASTHAN AGRICULTURE UNIVERSITY

BIKANER

Advertisement No. 8/89

Dated : November 11, 1989

Applications are invited on prescribed applications form for the following posts in Teaching/Research/Extension on regular basis in the University. The application form and Full details about Qualifications as prescribed by the University etc. can be obtained from the office of the Registrar, Rajasthan Agriculture University, Bikaner on payment of Rs. 10/- through crossed Indian Postal Order payable to the "Comptroller, Rajasthan Agriculture University, Bikaner" alongwith a self-addressed envelope of 27 cms. x 12 cms. size bearing postal stamp of Rs. 7.00 (seven only) and send the application form duly completed in all respect to the REGISTRAR, RAJASTHAN AGRICULTURE UNIVERSITY, BIKANER (Rajasthan) upto 18th December, 1989.

Assoc. Professor—Pay Scale Rs 3700-125-4950-5700

1.	Extension Education	1
2.	Horticulture	1
3.	Bio-Chemistry	1
4.	Plant Breeding & Genetics	1
5.	Agri Economics	1

Asstt. Professor—Pay Scale: Rs. 2200-75-2800-100-4000

1.	Plant Breeding & Genetics	8
2.	Rural Sociology	1
3.	Extension Education	1
4.	Agronomy	5
5.	Entomology	5
6.	Physics	1
7.	Mathematics	1
8.	Chemistry	1
9.	Civil Engg.	1
10.	Ag. Economics	2
11.	English	1
12.	Vety. Physiology & Bio-Chemistry	1
13.	Dairy Chemistry (Lien Vacancy)	1

General Note

1. Number of posts may be increased or decreased.
2. Application forms received after the expiry of the last date may also be considered at the discretion of the Vice-Chancellor.
3. 16% posts would be resesved for scheduled caste and 12% for scheduled tribes, subject to general suitability.
4. A higher start in the grade may be considered for exceptionally qualified candidate.
5. THE UNIVERSITY RESERVES THE RIGHT NOT TO FILL UP POST(S) ADVERTISED.
6. APPLICATION FORMS CAN ALSO BE OBTAINED FROM THE OFFICE OF DY. REGISTRAR, RAJASTHAN AGRICULTURE UNIVERSITY, CAMP-UDAIPUR.

Khushhal Singh
REGISTRAR

INDIAN INSTITUTE OF TECHNOLOGY, BOMBAY

P.O. IIT POWAI, BOMBAY-400 076

Advertisement No. D-68/89-90.

Applications are invited for the post of Assistant Registrar (Academic) in the prescribed form obtainable from the Registrar on request accompanied by self-addressed envelope (23 cm x 10 cm). Persons employed in Government/Semi-Government Organisations or Educational Institutions must apply through proper channel. Forms will be supplied upto 22-12-89 and completed applications together with crossed I.P.O. for Rs. 7.50 as application fee should reach the Registrar by 5-1-90. (No application fee need be sent by SC/ST candidates).

Outstation candidates called for interview will be paid first class rail fare from the place of their residence to Bombay and back by the shortest route. Relaxation of standard for SC/ST candidates exists as per Government of India rules.

Scale of Pay : Rs. 700-40-1100-50-1600. (Likely to be revised). Total emoluments on the minimum of the scale of Rs. 3063/- approx.

Job Description : Subject to the control of the Dean (A.P.), Registrar and Deputy Registrar (Academic), the appointee will be responsible for all

matters concerning the planning and organisation of examinations, the maintenance of students academic records, award of scholarships, maintenance of senate records and implementation of senate decisions, organisation of annual convocation etc. The Job requires familiarity with academic rules and regulations.

Qualifications : A good Bachelor's degree in Arts, Science, Commerce, Engineering or Technology of a recognised University together with a post-graduate degree or Diploma in any of the above fields or in pubilc administration/management of a recognised institute/university or its equivalent; or recognised qualifications as Chartered/Cost/SAS Accountant.

Experience : A minimum of 8 years relevant administrative experience preferably in a Government, Educational or Research Institute or in a Commercial Organisation of a national standing. The candidates would be expected to have some familiarity with academic activities and working procedure in higher educational institutions.

Desirable : (1) Teaching and research experience or experience of a life on a residential educational campus. (2) Experience of Computer System for information processing and retrieval.

In the case of candidates with exceptional qualifications length of experience may be relaxed suitably.

REGISTRAR

NORTH-EASTERN HILL UNIVERSITY

LOWER LACHAUMIERE SHILLONG-793 001

Advertisement No. F.1-54/Estt-II/89-546
Dated : 20th Nov., 1989

Applications are invited (on prescribed form) for the following Teaching and Non-teaching posts in different Departments / Centres of the North-Eastern Hill University in its Campus at Shillong (S), Kohima (K), Medziphema (M) in Nagaland, Aizawl (A) and Pachunga University College (P) at Aizawl, Mizoram, so as to reach the Officer on Special Duty, North-Eastern Hill University, Shillong-793 001 alongwith a crossed Indian Postal Order of Rs. 25.00 (Not applicable for SC/ST candidates) payable to the North-Eastern Hill University, Shillong-793 001 by 4th January, 1990.

The specialisations are indicated at the end of each section :

1. School of Physical Sciences

(a) Department of Chemistry : (S) Re-1, Physical Chemistry, preferable specialisation in Magnetic Resonance; (S) Le-1 (Leave Vacancy) Organic Chemistry; (P) Le-1, Open..

(b) Department of Mathematics; (S) Pro-1, Pure Mathematics/Operational Research / Computer Science/ Numerical Analysis; (S) Re-2, Mathematical Statistics / Operational Research/Algebraic Topology/Algebra; (S) Le-1, Algebra/Statistics/Differential Topology; (P) Le-2, Open.

2. School of Life Sciences

(a) Department of Bio-Chemistry : (S) Re-1, Molecular Biology.

(b) Department of Botany : (S) Re-1, Plant Embryology/Anatomy.

(c) Department of Zoology : (S) Pro-1, Developmental Biology / Parasitology / Biosystematics; (S) Re-2, Fish Biology/Animal Ecology / Endocrinology/Cell Biology; (P) Le-2, Open.

(d) Department of Home Science: (S) Pro/Re-1, Food Nutrition & Child Development/Clothiag & Textile.

(e) Centre for Applied Statistics : (S) Pro/Re-1, Open.

3. School of Environmental Sciences

(a) Department of Geology (K) Pro-2, Open.

(b) Department of Forestry (A) Pro/Re-1, Open.

4. School of Social Sciences

(a) Department of Philosophy : (S) Pro-1, Philosophy of Culture; (S) Le-1, Open.

(b) Department of Political Science: (S) Pro-1 (LV) (S) Re-1 (Leave Vacancy) Open; (S) Le-3, Open.

(c) Department of Anthropology : (S) Pro-1, Cultural Analysis/Bio Cultural Anthropology; (S) Re-2, Quantitative Anthropology/Anthropology of Literature/Anthropology of Development.

(d) Department of Economics : (S) Re-2, Developmental Economics/Economic History/Economics of North East Region/Manpower Planning; (A) Pro-1, Open, (A) Re-1, Rural Development; (P) Le-1, Open.

(e) Department of Psychology : (A) Pro-1, Open; Le-1, Open.

(f) Department of Social Work : (A) Pro/Re-1, Open.

(g) Department of Commerce : (K) Pro-2, Open Re-2, Open. (K) Le-1, Open : (P) Le-1, Open.

5. School of Languages

(a) Department of English : (S) Re-4, Modern Literature/19th Century Literature/Language Teaching; (S) Le-3 Open; (K) Pro-1, Modern Literature/ Language (K) Re-3, Modern Literature/ Language; (M) Re-1 Open; (A) Pro-1, Open; (A) Re-2, Language Teaching; (P) Le-1, Open.

(b) Centre for Creative Arts : (S) Pro-1, Open; (S) Re-1, Performing Arts.

6. School of Education

(a) Department of Education : (S) Pro-1 (Leave Vacancy) Open; (K) Re-1, Open (K) Le-1 (Leave Vacancy) Open; (A) Pro-1, Open. (A) Re-1, Open (A) Le-1, Open.

7. School of Agricultural Sciences & Rural Development (M).

(a) Department of Rural Development & Planning Re-1, Open.

(b) Department of Soil Conservation—Re-1, Open.

(c) Department of Agri. Engineering —Re-1, Open.

(d) Department of Agri. Zoology—Re-1, Open.

(e) Department of Agri. Extension —Re-1, Open.

(f) Department of Agri. Statistics—Le-1, Open.

(g) Department of Animal Husbandry—Le-1, Open.

8. Academic Staff College

(S) Director—1; (S) Le—1, Open.

9. Regional Sophisticated Instrumentation Centre

(S) Senior Scientific Officer—1.

10. Other Administrative Post (S)

(a) Director—1 (College Development Council).

Scale of Pay

1. Professor/Director. Rs. 4500-150-5700-200-7300.
2. Reader/Senior Scientific Officer. Rs. 3700-125-4950-150-5700.
3. Lecturer Rs. 2200-75-2800-100-4000.

Qualifications

1. Professor/Director : An outstanding Scholar with established reputation and significant contribution to the subject : OR (i) Doctorate in the subject or equivalent with (ii) Ten years teaching experience of Post Graduate classes or 15 years teaching experience including 5 years of P.G. Classes or 10 years post Doctorate Research experience and guidance.

2, Reader : (i) Doctorat in the subject or equivalent and (ii) 5 years teaching experience with atleast 3 years of teaching P.G. Classes or 7 years including 5 years of Honours Classes or 5 years of post Doctoral Research.

3. Lecturer : (i) Consistently good academic record with atleast 55% marks in the Master's Degree in the relevant subject or its equivalent grade (ii) Preference will be given to candidates who have research degrees like M.Phil/ Ph.D.

4. Senior Scientific Officer : (RSIC) (i) M.Sc/B.E. Electronics or equlvalent preferably with solid state experimental physics electronics/Instrumentation and sound background in handling and maintenance of sophisticated analytical instruments & (ii) Five years experience in maintenance/installation/service of sophisticated instruments preferably electron microscope/mass spectrometer/ spectre photometer.

Note

Candidates already in service should send their applications through proper channel. An advance copy may, however, be sent direct.

Applications received on plain paper, applications not in conformity with the requirements as specified in the application form and applieations received after the due date will not be entertained and no correspondence will be entertained in this regard.

Persons applying for more than one posts should send a separate application for each post.

In addition to the pay and allowances the University also provides a free hard furnished accommodations to teachers or fixed house rent allowance in lieu thereof.

The University reserves the right to negotiate with suitable persons who may not have applied formally. The University also reserves the right to fill up or not to fill up the post or to call only selected candidates for interview. The number of posts may vary.

Candidates applying for higher posts in any Department/Centre may be considered for a lower post at the discretion of the University.

Application forms can be obtained from the Section Officer, Establishment-II, North Eastern Hill University, Shillong-793 001 personally on payment of an Iadian Postal Order for Rs. 2/- or by mailing a written request to him/ accompanied by self-addressed stamped envelope of 23x10 cm size and an IPO for Rs. 2/- drawn in favour of North Eastern Hill University, Shillong-793 001.

J.M.S. Khongwir
ASSISTANT REGISTRAR
Establishment

NATIONAL METALLURGICAL LABORATORY

COUNCIL OF SCIENTIFIC & INDUSTRIAL RESEARCH JAMSHEDPUR 831 007

RECRUITMENT OF SCIENTIST 'F'

NML Advertisement No. 5/89

Last date for receipt of completed application 08 01-1990.

NATIONAL METALLURGIAL LABORATORY (NML), wants to appoint several Scientists 'F'.

NML's objective is pursuit of excellence in research in the preparation and properties of engineered materials; and the application of the results of the research for the benefit of the society. The applicants' background, commitment and career goals should be commensurate with NML's objective.

The pay scale, conditions of service, the areas of expertise, Job Requirement and Qualifications are indicated below :

Pay Scale : 5100-6300 plus Allowances as admissible under Central Government Rules. Total emoluments on minimum of pay Rs. 7,395/- (inclsive of HRA).

Conditions of Service : This is a contractual appointment initially for a period of six years The contract is extendable and the incumbent can also be confirmed. Consultancy subject to an upper limit of Rs. 50,000/- per year is permissible. Free Medical Aid and Leave Travel Concession also are permissible for the family as per Government's Rules. Residential Accommodation may be provided on payment of usual rent subject to availability.

The above positions are available in the areas and subareas indicated below :

Corrosion Protection : Protection & Coatings, Inhibition, Corrosion Behaviour; **Ferrous Process :** Process Development, Ore Reduction, Refractories; **Information & Research Managemnet :** Planning, Liaison & Technology Utlization, Publications, Library; **Instrumentation & Electronics :** Electronics & control Instrumentation, Microprocessor Application; **Materials Evaluation :** Creep, Non-destructive Evaluation, Fatigue & Fracture; **Materials Processing :** Casting & Powder Processing, Mechanical Shaping, Physical Characterization, Structural Characterization; **Mineral Processing :** Mineral Characterization, Mineral Beneficiation, Agglomeration; **Non-Ferrous Process :** Roasting & Leaching, Smelting & Refining, Extraction & Electrowinning; **Project & Process Engineering :** Process Engineering, Project Engineering, Prototype Development & Sub Contracting; **Construction & Maintenance :** Electrical, Mechanical & Civil.

Job Requirements

* To plan, lead, guide, organize and manage either research or developmental/operational programmes in the areas stated above;

and/or

* Formulate, execute and supervise large projects In the areas as indicated above

and/or

* Interact with user/market to transfer new technology developed as a result of the research, whenever required.

Qualifications

High academic qualifications with First Class Bachelor's Degree followed by a Master's or Doctorate Degree—all in Engineering or Technology.

Should have an established reputation and 10 years of proven record of research and/or creative ability in the activities as specified in the Job requirement.

In exceptional case, a candidate with a good Bacheior's degree (or equivalent) in engineering or a good Master's degree (or equivalent) in Science can also be considered if he has proven record of highly creative research and/ or technomanagerial achievements spanning 20 or more years.

Age : Preferably below 50 years, relaxable in deserving cases.

General Information

1. A duly constituted 'Screening Committee' will decide on the number of scientists to be invited to meet the full Selection Committee. The decision of the 'Selection Committee' will be final. Applications from employees working in Government Departments, Public Sector Organisations and Government funded research agencies will be considered only if forwarded through proper channel and with a clear certificate that the applicant will be released within three months of receipt of the appointment orders.

2. Upto 5 advance increments could be recommended by the Selection Committee for candidates with truly exceptional credentials and performance. Relaxation of experience in exceptionally bright cases is allowed.

3. Incomplete applications and those received after the last date will not be considered.

4. Those interested may kindly send in their Curriculum Vitae in duplicate in the form obtainable from the Controller of Administration, Nationa Metallurgical Laboratory, Jamshedpur 831007. The completed applications should reach the above address on or before 08.01.1990.

ROHILKHAND UNIVERSITY
BAREILLY

. No. 7/89/1257-1462 Dated : 10.11.89

NOTIFICATION

pplications (in six copies) for the following posts are invited by 30th December, on prescribed form obtainable from the Registrar, Rohilkhand University, eilly-243001 (U.P.) by sending a self-addressed stamped envelope of 9" x 6" and crossed postal order/Bank Draft for Rs. 25/- payable to the Finance cer, Rohilkhand University, Bareilly. Money Orders are not acceptable.

DETAILS OF POSTS

No.	Department	Faculty	Description of the Post
	LL.M.	Law	* Professor-One (Temporary)
	M.B.A.	Commerce	* Professor-One (Temporary)
	Animal Science	Life Science	Professor-One (Permanent)
	Plant Science	Life Science	Reader-One (Permanent)
	M.Ed.	Education	* Reader-One (Temporary)
	Adult Continuing & Extension Education		Project Officer-One (Temporary)

te : 1. The above posts marked as * are Temporary Ones. But they are likely to be made permanent.

2. Candidates who have already applied in response to our earlier advertisement No. 6/88 dated : 5-9-88 for The Posts of Prof. Animal Science and Project Officer, Adult and Continuing Extension Education need not apply again.

lifications and Pay Scales

For the Post of Professor (4500-7300)

Either Eminent Scholar with publi- d work of high quality and active agement in research and Ten Years erience of teaching the subject con- ned or Research and experience of ding research of doctorate level.

OR

Outstanding Scholarship with estab- ed reputation for significant contri- ion to knowledge.

For the Post of Reader (Rs. 3700-5700)

(i) Good academic record with a doctorate degree or equivalent published work and active engagement in research or innovation in Teaching methods or production of teaching materials, and

(ii) Five years experience of teaching or research including at least Three Years as Lecturer or in equivalent position. Further details regarding qualifications, service terms and permissible relaxations in qualifications will be provided with the application form.

For the Post of Project Officer (Rs. 700-1600) Likely to be revised.

a) **Essential**

(i) Good Academic record with at least Second Class Master's degree in the subject of Adult/ Continuing/Community/Extension Education/Community Development from a recognised Indian University or an equivalent degree from a foreign University.

(ii) M. Phil or Ph. D. in a subject related to adult learning or in a subject under Social Sciences or Education/Evidence of published learning materials and learning resources on areas listed in (i) above or published research work in any of the relevant area/ areas indicated above.

OR

(i) At least second class Master's Degree in Social Sciences/Social Work / Humanities / Education/ Sciences/Home Sciences.

(ii) Post Master's diploma in Adult & Continuing Education from a recognised Indian University or an equivalent diploma/degree from a foreign University.

(iii) M.Phil. or a Ph.D. in a subject related to Adult learning or in a subject under Social Sciences or Education/Evidence of published learning materials and learning resources on areas listed in a (i) above or published research in any of the relevant area/areas indicated above.

(b) **Desirable**

Two years experience of Field work on a subject having bearing on Adult/ Continuing/Extension/Community/Non-formal Education/Community Development.

OR

Two years teaching experience in the subject of Adult and Continuing Education at Graduate/Post Graduate levels. Preference will be given to SC/ ST. and disabled candidates & if otherwise considered suitable by the Selection Committee. Application forms will not be sent by post after 21st Dec., 1989. Applications on plain papers and received after due date are not acceptable.

B S. Gupta
REGISTRAR

RANI DURGAWATI VISHWAVIDYALAYA
JABALPUR

No. Estt./89/466 dated : 26-10-1989

Applications are invited on the prescribed application forms (in eight copies) obtainable on payment of Rs. 25/- by Indian Postal Order from the undersigned for the following posts in various University Departments so as to reach the undersigned on or before 23rd December, 1989 viz.

1. **Professors** : One each for Mathematics (Temporary) Sociology & Computer Science in the scale of pay of Rs. 4500-150-5700-200-7300.
2. **Readers** : One each for (i) History (ii) Tribal Studies (iii) Law (iv) Mathematics (v) Computer Science (vi) Instrumentation Centre and (vii) Two for Economics. The scale of pay is Rs. 3700-125-4950-150-5700.
3. **Lecturers** : One each for (i) Chemistry (ii) Philosophy (iii) Sanskrit (iv) English (v) Economics; and (vi) Two in Computer Science. The scale of pay is Rs. 2200-75-2800-100-4000.
4. **Director of Physical Education** : One in the scale of pay of Rs. 3200-100-3500-125-4500.
5. **Head of Computer Centre (System Manager)** : One in the scale of pay of Rs. 3700-125-4950-150-5700.
6. **System Engineer** : One in the scale of pay of Rs. 3700-125-4950-150-5700.

Note : (1) The essential qualifications for the above posts will be the same as prescribed by the U.G.C.

(2) Number of posts is likely to vary.

(3) Reservation percentage for SC/ST candidates as per rules only in the case of lecturers.

(4) These who have already applied in response to Advertisement Nos. Estt/88/1 and No. Estt/88/02/5020 dated 22-2-88 and 9-3-88 and No. Estt/88/152, dated 2-11-88 respectively need not apply again. However, they should update information and convey their willingness.

REGISTRAR

MASS COMMUNICATION RESEARCH CENTRE

JAMIA MILLIA ISLAMIA
JAMIA NAGAR, NEW DELHI-110025

Advt. No. 1 (UGC INSAT TV)/1989

Dated 20-11-1989

The Mass Communication Research Centre invites applications for the post of Technical Assistant in the grade of Rs. 1640-2900 for the UGC INSAT TV Project :

Educational & other Qualifications

Essential :

1. Matriculation or equivalent.
2. Diploma/Certificate in Electrical/Electronics from a recognised Institute with 5 years experience in the related field.
3. Practical experience of 5 years in the repairs of electronic equipment/sound equipment and repair and maintenance of film projector.

OR

1. National Trade Certificate.
2. Diploma/Certificate in Electrical/Electronics from a recognised Institute with 5 years experience in the related field.
3. Practical experience of 5 years in the repairs of electronic equipment/sound equipment and repair and maintenance of film projector.

Desirable

(i) Practical experience in film and video editing/dubbing/re-recording for 5 years.

(ii) Knowledge of Hindi, English

(iii) Age below 40 years.

1. Any or all of the above qualifications can be relaxed by the Selection Committee in exceptional cases.
2. The above mentioned post is meant for the UGC 1NSAT TV Project Unit which is Temporary and continue till March 1995 D A., C.C.A. H.R.A., P.F., Gratuity, Pension and other benefits will be given as per Jamia Rules.

Application forms can be had from the Administrative Officer, Mass Communications Research Centre on any day except Sundays and Holidays, either personally between 10.00 a.m. and 12.00 noon or by sending a self-addressed and stamped envelope. Application should be accompanied with crossed Indian Postal Order or Bank Draft for Rs. 7/- (Rs. 2/- for SC/ST candidates) in the name of the Administrative Officer, Mass Communication Research Centre, Jamia Millia Islamia, Jamia Nagar, New Delhi-110025.

The last date for receipt of applications is **15-12-1989**.

M.B. Mughal
ADMINISTRATIVE OFFICER

DR. YASHWANT SINGH PARMAR UNIVERSITY OF HORTICULTURE AND FORESTRY

"ESTABLISHMENT BRANCH"

ADDENDUM

Ref. : Advt. No. 4/89 dated 10-11-1989 appeared in *The University News* on 27-11-89.

Applications are also invited on the prescribed proforma for the following posts in the scale of Rs. 2200-4000.

1. Assistant Professor / Assistant Scientist of Floriculture—(1)
2. Assistant Estate Officer—(1)

Other instructions and condit remain the same.

B.S. Nai
REGISTR

TATA INSTITUTE OF SOCI SCIENCFS

DEONAR, BOMBAY-400 088

No. Admn/Advt/89

Dated : November 23, 1989

Applications are invited for following post. The prescribed ap cation form, alongwith the details qualifications, experience, and o conditions, etc., prescribed for the p should be obtained from the ab address, either in person, or by p along with a stamped (Rs. 2.00) addressed envelope superscribed " QUEST FOR APPLICATION FO FOR TEACHING POST". For SC candidates the prescribed form detailed information sheet are supp free of cost on receipt of their ap cation for the same along with a cop the caste certificate. The last date request for application form is 12-12

PROFESSOR (One post) in the partment of Personnel Management Industrial Relations, having spec sation in Industrial Psychology, In rial Sociology, Industrial or Lab Economics or Personnel Managem Industrial Relations, in the scale of of Rs. 4500-150-5700 200-7300 + D and other allowances. The candi should be eminent scholar with pu shed work of high quality, acti engaged in the research and have ab 10 years' experience of teaching an research at the post-graduate in the pective field and a good acade record with a doctoral degree, or e valent published work, with a second class Master's degree in one the subjects mentioned above, havin least 55% of the marks or a grade p average of 3.5 under the seven p UGC grade system. Qualificat relaxable in the case of persons outstanding professional experienc the field of Personnel Management Industrial Relations.

N. Krishnamoo
REGISTRAR

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